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WHAT DID American farmers accomplish in the second year United States was at war? In 1943 aggregate production of the 53 principal crops, including fruits, was 9 percent more than the average for the 5 moderately favorable crop seasons of 1937-41. With yields per acre 5 percent better, farmers harvested 4½ percent more acres than the 5-year average. Part of this increase was due to a slightly better than average growing season; to progressive improvement in farming practices; to changed emphasis in the agricultural adjustment program; to deferment of farm workers; to prices and programs which stimulated the planting of larger acreages than farmers were sure they could harvest; to the highest farm prices in history which attracted more risks. On the other hand, farmers faced shortages of skilled help, of supplies, of equipment, together with vexatious delays from wet weather and floods. \* \* \* Considering the difficulties encountered, much of the credit for the size of the 1943 increase must be given to the united efforts of all to push production toward the limits fixed by acres of land, hours of daylight, and human endurance. Farmers and their families worked more hours per week and more Sundays than in any year known to this generation.

# Commodity Reviews

## SEEDS

**A**CREAGE of 27 kinds of hay and cover crop seeds harvested in 1943 (totalling 4,862,000 acres) was 5 percent less than the 1942 acreage but 9 percent above the 10-year (1932-41) average.

Generally speaking, 1943 was not a good year for seed production with the result that yields per acre of most seeds not only fell below those of 1942, but were below average. Floods in large areas of the Central and West Central States resulted in delayed planting and rank growth of foliage at the expense of seed production. Drought following in the wake of the floods continued throughout the summer and fall in many sections. To a considerable extent, unfavorable weather for seed production nullified efforts to build up stockpiles of important kinds of seed.

Another factor affecting yields developed in relatively high prices which made it practical to harvest seed crops from many fields that otherwise might have remained unharvested.

Although 9 percent smaller than the 1942 production, the 1943 production of 27 kinds of hay and winter-cover-crop seeds, totalling about 721,000,000 pounds of clean seed, was about 22 percent above average. Production of alfalfa, clover, and lespedeza seed, comprising 38.4 percent of the grand total, was slightly larger than 1942, and 10 percent above the average. Production of grass seeds, making up 25.6 percent of the total, was 72 percent of 1942 production and 76 percent of the average production. Winter-cover-crop seed production, making up 36 percent of the total, was almost equal to the 1942 production and nearly three times the average production.

Farmer and dealer carry-overs of these seeds were 29 percent larger than in 1942 and 48 percent above average. However, when Austrian Winter peas are excluded, 1943 carry-overs are a

little below those of 1942. Larger carry-overs of the grasses and winter cover crop seeds more than offset the 49-percent decline in the carry-over of alfalfa, clover, and lespedeza seed. The 1943 supplies (production plus carry-over) of these seeds, totalling about 975,000,000 pounds of clean seed, were about 2 percent smaller than in 1942, but 28 percent larger than average.

Federal seed-purchase and price-support programs were important stimulants to the production of certain seeds. Purchase programs were authorized for the following kinds: Alyce, Hubam, yellow hop, and white clover; black medic; common, sericea, Kobe, and Tennessee 76 lespedeza; blue lupine, and wild winter peas. Price-support programs covered the following: alfalfa; alsike, Ladino, red, and biennial white, yellow, and mixed sweetclover; Bahia grass, Bermuda grass, smooth bromegrass, Buffalo grass, Dallis grass, blue grama, side-oat grama, meadow fescue, orchard grass, Sudan grass, timothy, and crested, slender, and western wheatgrass.

The December 15, 1943, prices received by growers for alfalfa, clover, and lespedeza seed averaged nearly 50 percent higher than a year earlier and nearly twice the 10-year average. On the same date growers received about 50 percent more for hay than in 1942, and 75 percent more than average. For soybeans, corn, oats, barley, and wheat they received about 40 percent more in 1943 than in 1942 and twice the 10-year average.

Based on these comparisons, it would seem that prices received by growers for these seeds, although much above average, are about in line with those of other competing commodities. Ceiling prices at growers', processors', wholesalers', and retailers' levels have been set by the Office of Price Administration for

five kinds of field seeds—alfalfa, red clover, alsike clover, sweetclover, and timothy.

High prices of most seeds will tend to hold down demand for them. Expected increased imports and decreased exports are likely to ease the demand situation somewhat. Imports for the fiscal year ending June 30, 1944, may exceed those of the preceding year by 50 percent, while exports may decline about one-third.

Carry-overs of most seeds at the end of the 1944 spring and fall planting seasons are likely to be the smallest in many years, if not the smallest on record. Production goals for 1943 set for 18 kinds of field seeds totaled about 880,000,000 pounds. Production of these seeds in 1943 failed to achieve the goals by 21 percent, falling short most prominently in the case of the legumes (35 percent). Except for Austrian Winter peas, production of individual winter cover crop seeds did not achieve the goals; however, the record production of Winter peas resulted in a total winter cover crop production 13 percent higher than the goal. Grass-seed production was 24 percent short of achieving the goal.

Notwithstanding the fact that the 1943 production of field seeds fell well below the 1943 goals, 1944 goals have been set at approximately 1943 levels for most of these seeds, as well as for Sudan grass. This was done not only to meet the needed increases for planting hay, pasture, and cover crops but also to build up reserves for use if serious seed-crop failures develop over wide areas in 1944 or 1945 or if the demands of the United Nations prove to be greater than expected.

The Government plans to further strengthen its several programs to stimulate production not only of common strains of important kinds of seeds but also of improved strains from which more hay or pasture can be obtained from fewer acres. This development is among the objectives of the newly created Committee on Seed Production Programs.

## WHEAT AND RYE

**W**INTER wheat production in 1944 was estimated December 1 at 526,957,000 bushels—2.6 million bushels less than the 1943 crop. The acreage, 47,127,000 acres, is one-fourth more than the winter wheat acreage sown for the crop of either 1942 or 1943 and only 2 percent less than the 1932-41 average. Yield was forecast at 11.2 bushels per seeded acre as compared with 14.0 in 1943 and a 10-year (1932-41) average of 11.4.

In much of the important Great Plains area, the autumn was dry and wheat went into the winter in a condition that indicated heavy abandonment.

The acreage of rye seeded for 1944 harvest, 4,922,000 acres, was 15 percent below the acreage seeded for 1943 harvest. The condition of rye on December 1 was 10 points below the condition a year earlier, but 1 point above the 1932-41 average for December 1.

## PIG CROP

**H**OG production will decline in 1944 from an all-time peak in 1943, according to the December Pig Crop Report. Farmers now plan to have 10,155,000 sows farrowing in the spring season of 1944 (December 1 to June 1)—16 percent fewer than the record number farrowing in the spring of 1943.

Farmers expected, last June, to breed 25 percent more sows for farrowing in the fall of 1943 than the number farrowing in the fall of 1942. But owing to decreasing feed supplies and an outlook for less favorable hog-feed price relationships the actual increase was only 12 percent. The fall pig crop, 47,831,000 head, was still the largest ever produced.

The combined spring and fall pig crop of 1943 is estimated at 121,847,000 head—17 percent more than the combined crop of 1942 and 67 percent above the 1932-41 average. Farmers had a much larger number of hogs over 6 months old (including brood sows)

on hand December 1 than the record number a year earlier.

## FEED

**A**LTHOUGH 1943 feed grain production was large in total, it is not evenly distributed geographically, nor is it large in proportion to livestock and poultry numbers. Production of the 4 principal feed grains in 1943 totaled 115 million tons—exceeded only in 1942 and 1920. The supply per unit of livestock is less than in any year since the drought, but will probably be sufficient for normal feeding if closely and efficiently utilized. However, the rate of milk production per cow and egg production per layer which had been running considerably above normal, reflecting a high rate of feeding, have already shown a tendency to decline. Because the movement of corn out of surplus areas is smaller than usual in relation to the total corn crop, hog as well as dairy and poultry producers outside the Corn Belt are having difficulty in maintaining the high rate of production reached early in 1943.

The total supply of all feed concentrates is estimated at 169 million tons, compared with 172 million tons (revised) in 1942-43. Included in the totals are 11.4 million tons of high-protein feeds in 1943-44 compared with 11.2 million tons last season.

With increased movement of wheat from Canada by rail in prospect for this winter, the total quantity of wheat to be fed in the 1943-44 crop year now seems likely to exceed 15 million tons, compared with less than 10 million tons in 1942-43.

The 99,543,000 ton hay crop is the second largest produced, and will probably be sufficient for normal feeding. Local shortages of both grain and roughage are reported in the Southwest where production of grain and forage was reduced by drought, and in regions where farmers are having difficulty in making their usual purchases of concentrates.

The 1943 corn crop, second largest on record, totals over 3 billion bushels. Yield per acre was mostly above average with the exception of Arkansas, Oklahoma, Maryland, Delaware, New Jersey, and Pennsylvania, where the drought was severe.

Effective December 6, the Office of Price Administration raised the ceiling price on corn about 9 cents a bushel at Chicago, and froze prices of oats, barley, and grain sorghums for 60 days, pending issuance of a permanent regulation for these feeds. On the same date, the War Food Administration announced a series of steps to bring feed grain prices more nearly in line with each other, to encourage as efficient use of the grains as possible, and to make more feed available to the deficit areas. The steps include elimination of the subsidy the Commodity Credit Corporation has been paying on corn moving from surplus to eastern and southern deficit areas, an increase of 20 cents a bushel in the price of Government feed wheat, and an offer to buy corn throughout December at the old ceiling price in 150 counties on the fringe of the Corn Belt where the new ceilings on corn are below the old ceiling prices.

The WFA also announced that beginning December 1, the CCC would lend farmers in specified Corn Belt counties, who had met 90 percent of their war-crop goals, from \$1 to 97 cents a bushel on 1943 corn.

## FATS AND OILS

**S**IGNIFICANT changes occurred in 1943 in the way in which fats were used. Exports to our Allies were roughly 50 percent greater than in 1942, and a substantially larger quantity was used for military purposes—both to feed our men and to manufacture the implements of war. Civilian consumption of food fats was reduced 5 to 6 percent.

Estimates of total production of fats and oils from domestic materials in the crop year 1943 have been reduced to about 11.2 billion pounds,

principally because of a reduction in indicated soybean and peanut production.

Production of soybeans in 1943 is now estimated at 196 million bushels and production of peanuts at 2,562 million pounds—an increase over 1942 of 5 percent in soybeans and 16 percent in peanuts. The soybean production estimate for 1942 has been revised to 187 million bushels. Flaxseed production in 1943, estimated at 52 million bushels, was 27 percent greater than in 1942. Cottonseed production in 1943 is estimated at 5.1 million tons, 11 percent less than last year.

Expansion in acreage of flaxseed and soybeans more than offset the moderately reduced yields per acre. Peanut acreage in 1943 was materially increased, and because of unusually high yields per acre in the southeastern areas, the national average yield of 649 pounds per acre was slightly greater than in 1942, in spite of reduced yields in the Virginia-Carolina and southwestern areas. Cottonseed acreage and yield per acre were both somewhat lower in 1943 than in 1942.

Stocks of primary fats and oils on October 31 amounted to 1,960 million pounds (crude basis), 73 million pounds more than the seasonal low point reached a month earlier. Inventories will increase until early spring, and will probably continue at a level higher than a year earlier.

Creamery butter production declined seasonally in November, and continued about 15 percent under a year earlier. Output of lard in federally inspected plants increased sharply as a result of increasing hog slaughter.

Export requirements for fats and oils may increase at the end of the European war. In the 12 months after cessation of hostilities, available supplies outside the United States will not be sufficient to meet even three-fourths of the pre-war requirements of continental Europe for food

fats. The supply situation although expected to be somewhat easier in the next few months, may again become very tight before the end of 1944.

## INCOME

**I**NCOME payments in 1943 are now estimated at 142 billion dollars. During the first half of 1944 these payments are expected to rise even higher than in recent months.

Increased production rather than higher prices is believed to be the main factor in the tremendous rise in income payments during the last 2 years. Recently, however, there has been some decline in the rate of increase in production, and there are indications that total industrial production may level off in the next few months. Non-agricultural employment declined steadily in 1943. Increased production of some goods is offset by decreased output of other types. Also, contract cancellations and reductions of Government purchases are assuming greater importance, and more conservative buying and inventory policies are in evidence.

To date, Federal budget receipts this fiscal year have surpassed expectations at the beginning of the fiscal year, and expenditures have been less than anticipated. Receipts will probably total 41 billion dollars, 3 billion more than the original forecast. War expenditures are estimated at 92 billion, or 8 billion less than expected. Non-war expenditures are likely to be 6 billion, as first estimated.

A total deficit of about 57 billion during the current fiscal year is forecast, instead of the 68 billion formerly predicted. Since nearly 8 billion dollars must be spent monthly during the remainder of the fiscal year if the reduced total for war expenditures of 92 billion dollars is to be achieved, there is likely to be little let-up soon in restrictions on manufacture of civilian goods.

Government and export demands, subsidies, taxes, and rationing, as well as increased consumer income, are

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products
<b>1942</b>			
January.....	149	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	161	101
June.....	151	151	100
July.....	154	152	101
August.....	163	162	107
September.....	163	163	107
October.....	169	164	110
November.....	169	155	109
December.....	178	156	114
<b>1943</b>			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	163	114
August.....	193	165	117
September.....	193	165	117
October.....	192	166	116
November.....	192	167	115
December.....	197	168	117

<sup>1</sup> Ratio of prices received to prices paid, interest, and taxes

largely responsible for changing demand for farm products. While Food Distribution Administration purchases of agricultural products for lend-lease have declined seasonally since the mid-year, they are still a good deal higher than a year ago. Purchases during the period January-October 1943 totaled 1.6 billion dollars, a 45-percent increase over the same period in 1942.

While wholesale prices of nonagricultural commodities have risen gradually, being now about 20 percent higher than at the outbreak of war in 1939, wholesale prices of farm products have decreased since June from a point two-thirds higher than in the 1935-39 period. Recent developments which tend to impede the decline are higher ceiling prices for corn and Burley tobacco.

The index of prices paid by farmers, including interest and taxes, was nearly 8 percent higher in December 1943 than a year earlier.

## POULTRY AND EGGS

THE favorable egg-feed price relationship which is in prospect for the flush period of egg production will encourage farmers to keep as many hens as they can house and feed in the first part of 1944.

Primarily because of larger requirements for drying, the out-of-storage movement of frozen eggs has averaged the largest on record throughout the current season. During November the net withdrawal of frozen eggs was 15 million pounds larger than in November 1942, a 28-percent increase.

The weakened demand for baby chicks, which first became generally noticeable in mid-October, continued through November. To meet the 1944 national goals, it is estimated that 8 to 12 percent fewer chicks from commercial hatcheries will be needed than were produced in 1943.

Total commercial hatchery production for the first 11 months of 1943 totaled 1,405,820,000 chicks, a 20 percent increase over the same period in 1942. November production was 23,533,000 chicks, 7 percent less than November 1942.

Marketings of chickens have continued much larger than a year earlier. Civilian consumption has been at record levels, even though storage stocks have been accumulating at a faster rate than in 1942. On December 1, storage stocks of poultry totaled 197 million pounds, a record high for that date.

Production of turkeys has been relatively stable during the war, in contrast to sharp increases for other poultry items. Turkey production was limited by especially short supplies of hatching eggs in 1943. Prices were bid to relatively high levels, which may encourage farmers to keep larger breeding flocks for 1944 egg production. However, the expected short feed supplies will tend to restrict turkey production in 1944.

Civilian supplies of poultry will be at the seasonally low level from Febru-

ary through April. In the first half of 1944, supplies may be slightly larger than a year earlier, but are likely to be considerably short of demand at ceiling prices. A year-end order of the War Food Administration prohibits commercial sales and uses of storage chicken, by holders of 3,000 pounds or more at the time the order was issued, until 70 million pounds have been purchased by the armed forces and other Government agencies.

Civilian supplies of eggs last fall were somewhat larger than a year earlier, and in the first half of 1944 are likely to average at least as large as in the corresponding period of 1943.

## WOOL

**A**LMOST complete removal of Government restrictions on civilian wool use through an amendment to WPB Conservation Order M-73 issued

on November 19 is expected to result in a marked increase in production of all-wool civilian fabrics. Production for civilian use has increased sharply in recent months. While approximately the same quantity of wool cloth is being manufactured, most recent reports indicate that only 41 percent of the orders placed through August this year were intended to meet military requirements. In 1942 civilian sales amounted to 41 percent of the total.

The decline in production of military woolen goods is expected to reduce raw wool requirements, since on the average less wool per yard is utilized in civilian goods. Mill consumption in most months of 1943 thus far reported has been larger than in the corresponding month of 1942. The general trend has been downward since March, however, and this will probably continue largely because of decline in employment in the mills, the effects of which

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets, based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		December 1942	November 1943	December 1943	Parity Price, December 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars	0.884	0.837	1.103	1.37	1.43	1.49
Corn (bushel).....do	.642	.691	.802	1.05	1.11	1.08
Oats (bushel).....do	.399	.340	.474	.752	.789	.670
Rice (bushel).....do	.813	.742	1.675	1.83	1.83	1.37
Cotton (pound).....cents	12.4	10.29	19.55	19.40	19.85	20.83
Potatoes (bushel).....dollars	.697	.717	1.116	1.33	1.35	1.21
Hay (ton).....do	11.87	8.87	10.46	14.50	15.20	19.90
Soybeans (bushel).....do	1.96	.954	1.59	1.80	1.81	1.61
Peanuts (pound).....cents	4.8	3.55	0.19	7.12	7.10	8.06
Apples (bushel).....dollars	.96	.90	1.43	2.24	2.64	1.61
Oranges, on tree, per box.....do	1.81	1.11	2.85	2.24	2.24	1.95
Hogs (hundredweight).....do	7.27	8.34	13.26	12.90	12.80	12.20
Beef cattle (hundredweight).....do	5.42	6.56	11.27	11.80	11.40	9.11
Veal calves (hundredweight).....do	6.75	7.80	12.94	12.70	12.70	11.80
Lambs (hundredweight).....do	5.88	7.79	12.49	11.90	12.10	9.88
Butterfat (pound) <sup>1</sup> .....cents	28.3	29.1	48.9	50.9	51.0	48.4
Milk, wholesale (100 pound) <sup>1</sup> .....dollars	1.60	1.81	3.06	3.39	3.40	2.94
Chickens (pound).....cents	11.4	14.9	20.5	24.3	24.4	19.2
Eggs (dozen).....do	21.5	21.7	39.7	47.1	44.9	44.0
Wool (pound).....do	18.3	23.8	40.0	40.7	40.5	80.7
Tobacco (pound):						
Burley, type 31.....do	22.2	19.1	43.0	-----	45.5	80.6
Air-cured, dark, type 35-36.....do	10.9	8.6	13.2	-----	25.7	11.8
Sun-cured, type 37.....do	14.6	11.4	21.0	-----	40.0	15.8

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under Section 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1910-July 1929.

<sup>5</sup> Does not include dairy feed payments since November 1943.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary. <sup>8</sup> 5-season average, 1934-38.

<sup>9</sup> 10-season average, 1919-28.



have not been offset by longer working hours.

Wool prices have strengthened in recent months and are now at or near ceiling levels. The Commodity Credit Corporation, which holds most of the unsold balance of the 1943 clip, is offering these wools at ceiling prices.

Greater production of woollen fabrics for civilian use has brought a strong demand for foreign wools, which are less expensive than comparable grades of domestic wool. Larger-than-usual purchases of Australian wools were made this season, owing to the fact that they are lower in price than comparable grades of domestic wools. Foreign wool accounted for 68 percent of the September 1943 consumption, compared with slightly more than 50 percent in the 2 preceding years.

Use of apparel wool on a greasy shorn and pulled basis totaled 821 million pounds the first 9 months of

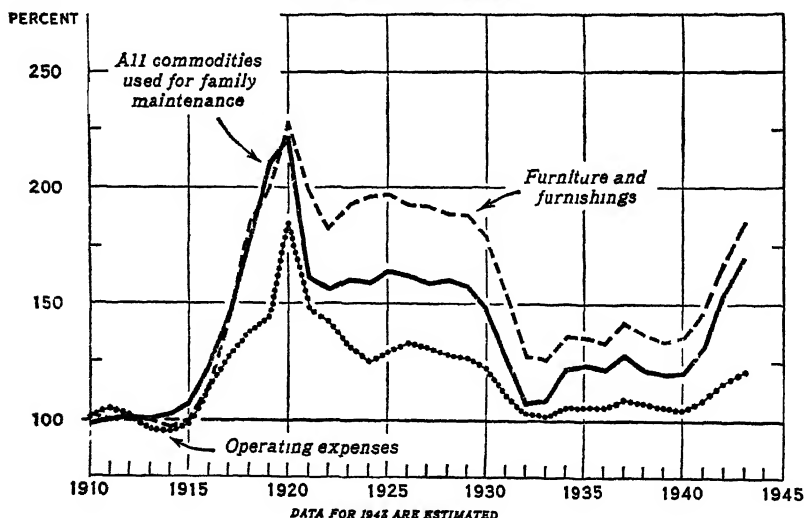
1943, as compared with 797 million pounds during the same period of 1942. Carpet wool consumption declined in 1943, totaling 32 million pounds (grease basis) through September 1943 as compared with 48 million pounds in the first 9 months of 1942.

The January 1, 1944 sheep numbers on farms may be substantially less than the 53 million head previously forecast because of unusually large sheep liquidation in recent months. Shorn wool production in 1944 may therefore be somewhat smaller than in either 1943 or 1942.

Unless the large slaughter of sheep and lambs continues through 1944 the pulled wool production may be reduced below 1943 and 1942. But the number of shearlings used by the Army in 1944 may be less than in 1943 so that the wool from these pelts probably will be pulled.

# PRICES PAID BY FARMERS FOR OPERATING EXPENSES, FURNITURE AND FURNISHINGS, AND FAMILY MAINTENANCE, UNITED STATES, 1910-43

INDEX NUMBERS (1910-14=100)



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

# Nutritive Value of U.S. Food Supply, 1930-43

**P**RODUCTION of food has shown marked reactions to the economic crises since 1930. The lowest recorded point in production was reached in 1935, the direct result of the drought. In every year since that time, the per capita production of food has increased over the preceding year, breaking all previous records in 1941, 1942, and again in 1943. Per capita production in 1943 totaled about 125 percent of the 1935-39 average, over 30 percent greater than the low point of 1935.

Consumption of food per capita in 1935, measured by volume, was at the low point of 96 percent of the 1935-39 average, while the peak was reached in 1941. However, the high point in consumption was only 15 percent above the low point, in contrast to a 30 percent difference between the high and low points in production during the same period.

Consumption of "luxury" products, such as meats and eggs, reached a low point in 1934 and 1935, as a result of drought conditions. There were compensating increases in the consumption of potatoes, beans, and nuts, while the consumption of fruits and truck crops increased gradually.

As a result of high incomes and relatively plentiful supplies, the volume of food consumption reached its peak in 1941. Consumption of dairy products, meats, fish, and poultry, beans and nuts, truck crops, sugar and sirups were all at the highest point since 1930, while potatoes had fallen to the lowest level ever recorded. Consumption of fruits, fats and oils, and eggs decreased slightly, and the consumption of grain products remained at the level prevailing, with slight variations, since 1930.

In 1942, the demand for food supplies for war purposes began to be felt, and although the consumption of fresh milk, poultry, eggs, and truck crops, continued to rise, there were noticeable reductions in the consumption of

meats and fish, beans and nuts, fruits, fats and oils, and the imported commodities, coffee, tea, cocoa, and spices. In spite of the adjustments necessitated by wartime conditions, there was less than a 3-percent decline from 1941 in the volume of foods consumed.

In 1943, with nearly one-fourth of our food supply allocated to war needs and about one-half of the civilian supply under ration control, civilian consumption declined only about 2 percent below the 1942 level, but was 10 percent above the low point reached in 1935. Increases in the consumption of fresh milk, poultry, eggs, potatoes, beans and nuts, and grain products, some of which are now enriched with iron and the B vitamins, offset to some extent the curtailment in civilian supplies of meats, fruits and vegetables, fats and oils, and sugar.

**N**UTRITIONAL analysis of the average diet for each year beginning with 1930 indicates that variations from year to year have been relatively smaller than the variations in production and volume of consumption. Changes in consumption of some of the major groups of foods have been partially compensated for by changes in other groups of similar nutritive content. On the whole, the nutritive content of the average diet has shown some improvement since the middle 1930's, despite the decline in consumption during the past 2 years.

Even if the effects of enrichment of grain products are not included in this analysis, nutritive value of the over-all food supply for the last three years has remained fairly constant, at a level somewhat above that for 1935-39. For iron and the B vitamins, the nutrients included in the enrichment program, the total quantities in the 1943 national diet were considerably higher than was available in 1941 or even in 1942 when enriched bread and flour first became popular.

Since the number of calories a person can use day in and day out is limited unless he wishes to gain weight, it is not surprising that the relative food energy or calorie value of the per capita civilian food supply has remained fairly constant since 1930. In 1941, there were 6 percent more calories available in the civilian food supply than in 1935-39. But it is possible that in 1941 there was more wastage of foods than in the comparatively less prosperous earlier years or since the outbreak of war when food conservation is being stressed. Since the same waste factors have been used for each year in these calculations, the higher figure for 1941 may be slightly exaggerated. The civilian food supplies for 1942 and 1943 furnished fewer calories than in 1941, principally because of the decrease in consumption of sugar.

Protein consumption was very stable during the 1930's but has been at a higher level since 1940. Estimates for 1943 place protein in the food supply at 8 percent above the 1935-39 level. Throughout the 14 years from 1930

to 1943 between 56 and 60 percent of the total protein was derived from animal sources, i. e., from meat, poultry, fish, milk, and eggs. This is a relatively higher proportion from animal sources than in the diets of most of the countries, even before the war.

**T**HE VITAMIN A value in the national food supply has remained remarkably constant during the last 14 years. As the table indicates, about half of the vitamin A value of the average diet is furnished by plant products, especially the green and yellow vegetables. The remainder is supplied by animal products such as eggs, milk, butter, and liver. Vitamin A is essential to the growth and development of children and also to the maintenance of health at all ages. Shortage of this vitamin in the diet results in injury or deterioration of the mucous or surface membrane of the body and may lower resistance to disease. "Night-blindness" is also a result of too little vitamin A in the diet.

Vitamin C has shown a definite upward trend since 1930 although there

**Daily Nutritive Value Per Capita of Civilian Food Supply and Contribution of Specified Food Groups, 1930-39 Average**

Food group	Food energy	Protein	Calcium	Iron	Vitamin A	Vitamin C (ascorbic acid)	Vitamin B <sub>1</sub> (thiamine)	Riboflavin	Niacin
Total from all sources, per capita per day (uncooked basis).....	Calories 3,260	Grams 59	Grams 0.86	Milligrams 13.9	International units 6,550	Milligrams 93	Milligrams 1.81	Milligrams 1.97	Milligrams 17.8
Percentage of total contributed by each food group									
Animal products.....	44	58	80	43	46	9	60	76	63
Milk, cheese, ice cream.....	12	22	75	8	17	7	8	46	3
Eggs.....	2	6	3	8	6	0	5	10	( <sup>1</sup> )
Meat, poultry, fish.....	10	28	2	25	11	2	43	19	58
Fats and oils <sup>1</sup> .....	20	2	( <sup>2</sup> )	2	12	0	4	1	2
Vegetable products.....	56	42	20	57	54	91	40	24	37
Potatoes.....	4	3	3	8	15	21	8	4	11
Dry beans, peas, nuts.....	2	5	2	9	( <sup>2</sup> )	0	6	3	5
Tomatoes, citrus fruit.....	1	1	2	2	7	24	3	1	2
Green, yellow vegetables.....	1	2	3	5	21	28	4	3	2
Other vegetables, fruit.....	4	2	4	8	11	18	4	6	4
Grain products.....	27	29	5	22	( <sup>2</sup> )	0	15	7	13
Sugar, sirups.....	16	0	1	2	0	0	( <sup>1</sup> )	( <sup>1</sup> )	0
Cocoa, chocolate.....	1	( <sup>2</sup> )	( <sup>2</sup> )	1	0	0	( <sup>2</sup> )	0	0
Total.....	100	100	100	100	100	100	100	100	100

<sup>1</sup> Includes butter, bacon, salt pork, and some vegetable oils.

<sup>2</sup> Less than 0.5 percent.

has been a tendency toward a leveling off in the forties. This upward trend is associated with increasing consumption of citrus fruit and tomatoes, which are rich in this vitamin. Estimated per-capita intake of vitamin C has increased 15 percent since 1930 and the increase in consumption of citrus fruit and tomatoes has been approximately 50 percent. The largest single increase has been in the consumption of oranges. The per-capita quantity available for 1943 was practically double that for 1930. Tomatoes and citrus fruit furnished 30 percent of the total ascorbic acid in the food supply in 1943 as compared to 20 percent in 1930 and an average of 24 percent in 1930-39.

Vitamin C, whose chemical name is ascorbic acid, is widely known as the vitamin which prevents scurvy. But it is also less spectacularly needed by the minute blood vessels which are all through the body. Sufficient vitamin C in the diet prevents hemorrhages or oozing of the blood from these vessels and also helps to keep a healthy condition of the teeth and gums.

**Q**UANTITIES of two important nutrients in the per capita civilian food supply have increased steadily since 1934. These nutrients are calcium and riboflavin (sometimes called either vitamin B<sub>2</sub> or G). The increases in the quantities of calcium and riboflavin available in the civilian food supply since 1934 have been largely due to higher consumption of milk and milk products other than butter. Milk (equivalent) consumption has increased by 25 percent since 1934; total calcium intake by 20 percent; and total riboflavin intake by 15 percent (excluding that added by enrichment of flour and bread during the latter quarter of 1943). Since three-fourths of the total dietary calcium and almost one-half of the riboflavin is derived from milk and milk products, these proportionate increases are not surprising. If the consumption of other foods remains about the same, it follows that a 5-percent increase in

milk consumption will bring about approximately a 4-percent increase in the national supply of food-calcium available and a 2- or 3-percent increase in the total riboflavin in foods (not counting synthetic products added).

Increases in the amounts of calcium and riboflavin available in the national food supply are particularly welcomed by nutritionists because studies have shown that these two nutrients are most often deficient in the diets of many people, especially those not living on farms. Calcium is important to the body as a builder and maintainer of bone and teeth and is also needed in many of the fluids which control the body's involuntary activities. Riboflavin promotes growth and is essential for normal nutrition at all ages. Insufficient quantities of riboflavin for any length of time may be followed by digestive disturbances, nervous disorders, some types of "eye-strain," and lowered general resistance.

**I**RON, although an important nutrient, is usually fairly well supplied in average mixed diets. Because iron is supplied by a variety of different foods and since no one food or group of foods makes an outstanding contribution of iron to the national food total, there was little variation in the per capita quantity available until 1942.

Late in 1941 under the enrichment program, there was placed on the market white bread and white flour to which extra iron, vitamin B<sub>1</sub>, and niacin had been added. Gradually during 1942 more and more of the white bread and flour sold was enriched. In October 1943, larger amounts of iron, vitamin B<sub>1</sub>, and niacin and extra riboflavin, another B vitamin were added. Since January 1943, by War Food Administration order, nearly all commercial white bread has been enriched.

The enrichment program has affected the average per-capita supply of iron in the diet and also to a greater extent the supply of vitamin B<sub>1</sub> or thiamine. The quantities available in the food supply decreased from 1932

to 1935, but in 1936, largely due to a sizable increase in pork production, the trend was reversed and started upward, reaching a high peak in 1943. Without enrichment, however, there would have been a leveling off in the early 1940's. The average quantity of vitamin B<sub>1</sub> available in civilian food during 1943 was 33 percent higher than in 1935-39, and 24 percent higher than it would have been without the enrichment of grain products. Because the minimum quantities of the extra iron and B vitamins to be added to enriched bread and flour were increased beginning October 1, 1943, the estimated benefits of enrichment will be even greater in 1944.

As a result of the enrichment of white bread and flour, the grain products group as a whole now furnishes about 30 percent of the total thiamine in the average per capita food supply, compared to about 15 percent prior to enrichment. Somewhat larger proportions of iron, riboflavin, and niacin are also furnished by grain products than in recent years, although not as great as for vitamin B<sub>1</sub>.

Nutritionists and physicians stress the need for adequate vitamin B<sub>1</sub> in the diet because insufficient quantities may be the cause of a generally poor physical condition which usually shows up in a poor appetite and often in certain nervous disorders. Although it is usual to associate beriberi with B<sub>1</sub> deficiency, actually few cases of beriberi are found in this country today. Niacin or nicotinic acid is known as the pellagra-preventing vitamin, but other vitamin deficiencies usually exist in the diets of pellagrins.

**T**HE improvement in the nutritive value of the over-all civilian food supply for recent years is supported by surveys of the food consumed by families at different income levels. Comparison of dietary studies made in 1936 and in 1942 indicate that in 1942 families were consuming more milk, eggs, fruit, and vegetables, i. e., the protective foods—than in 1936.

Higher incomes and nutrition education have both combined to provide better nutrition for most persons in this country.

However, we should not lose sight of the fact that there are still many persons in this country whose incomes have not risen while the cost of food has gone up, and that there are also many persons whom the nutrition education program has not yet reached.

It has been estimated that in the spring of 1942, before rationing and before food shortages, probably at least one-third of American families had diets deficient in calcium, riboflavin, or both, compared to recommendations of the National Research Council. Smaller proportions of the families had diets deficient in the other nutrients. Although these estimates show improvement since 1936, they indicate that there are still many people in this country whose food does not measure up to recommended dietary practice. Therefore, just because the over-all average figures indicate that this country is adequately fed, we must not relax our efforts to produce more food and to see that everyone has the means and the knowledge to buy an adequate diet.

Still more of the protective foods especially need to be produced. If all families were to follow a moderate-cost food plan which would assure good nutrition, at least a fifth more milk and citrus fruit and tomatoes would be needed than were available in 1943, and twice as large quantities of green and yellow vegetables.

In the past few years we have provided food for the best-fed armed services in the world and have shipped large quantities of food to our allies. We have already begun to send food to the reoccupied countries. In spite of these unusual demands on our food supply, we have been able to make considerable progress in improving our national diet.

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# Farm Fire Losses in 1943

THE 1943 fire loss on farms in the United States was about \$90,000,000, an increase of 12½ percent over 1942, according to a recent estimate by the Committee on Farm Fire Protection of the National Fire Protection Association. In 1942 the farm fire loss was placed at \$80,000,000.

For several years prior to 1943 the farm fire loss declined in terms of dollars notwithstanding an annual increase in the dollar volume of the total national fire loss, of which the farm loss is a part. The national fire loss has been estimated for each year since 1916 by the National Board of Fire Underwriters on the basis of loss reports received by the Actuarial Bureau of this Board. These reports come to the Bureau only when affiliated and reporting insurance companies are involved in the fire loss. Hence, the data collected are incomplete—particularly in the case of losses of farm property, much of which is insured in nonreporting farm mutuals, and substantial parts of which are not insured at all.

Uninsured farm property is most common in the South, where commercial insurance rates are high, and where farm mutual insurance is least developed. In addition to the annual fire-loss estimates, the National Board also issues monthly fire-loss figures, and in all these estimates it makes a rough allowance for unreported and uninsured losses.

Although for reasons indicated, the National Board figures are by no means exact, they are the best available; and no doubt reflect the change in the dollar volume of the national loss from year to year with substantial accuracy. According to these estimates, the national fire loss in 1916 was approximately 258 million dollars. From that point it increased by tens of millions nearly every year until 1926 when the annual loss reached an all-time high of 562 million dollars.

Following this peak in the annual fire loss an encouraging 10-year decline was recorded; and for 1935 the estimated loss was 235 million dollars or only about 42 percent of the 1926 loss.

In 1936 a new upward trend appeared, and the estimated national loss beginning with that year has been as follows:

	<i>Million dollars</i>
1936.....	267
1937.....	255
1938.....	258
1939.....	275
1940.....	286
1941.....	304
1942.....	314

No estimate for the completed year 1943 is yet available. But, from the monthly figures released by the National Board of Fire Underwriters, it is evident not only that the 1943 loss will show another increase but that it will be one of the biggest increases since 1935.

ESTIMATES for that part of the annual fire loss that occurs on American farms have back of them even less complete data than is true for the national figures. These figures may in fact involve substantial margins of error. It may be said of them, however, as was said of the National Board figures, that they are the best available.

For some years prior to 1940, the estimates of the Committee on Farm Fire Protection for the annual farm fire loss stood at about 100 million dollars. For 1940, the estimate was reduced to 95 million. For 1941, it was again reduced by 5 million, the estimated loss for that year being placed at 90 million. For 1942, as already indicated, the estimate was placed at 80 million.

In each of these years it appears that the committee, in arriving at its estimate, had fairly good grounds for

the adjustments made in the annual figure, but the base to which the change was applied has never been highly satisfactory and its history is too long to be presented here. Perhaps the principal weakness in the evidence upon which the percentage of increase or decrease has been determined lies in the fact that the committee has habitually met about the first of December and made its estimate for the current year on the basis of about 10 months' reported experience. In partial justification of this practice, it may be pointed out that farm-fire-loss totals are not affected by unexpected conflagrations such as occasionally cause sudden bulges in urban loss figures. An attempt similarly to estimate the urban fire loss for the year on the basis of 10 months' experience would involve a much larger possibility of error.

TO review the evidence upon which the actions of the committee were based in each of the recent years for which figures have been given would be tiresome and perhaps useless. The evidence in each case, however, was essentially on a par with that on the basis of which the estimate for 1943 was raised by 10 million which made it the same as the 1941 figure of 90 million. This 1943 evidence may be briefly outlined as follows.

In the first place, the National Board's monthly loss figures for the first 10 months of 1943 showed an increase of about 36½ million, or 14½ percent, over those for the corresponding months of 1942. This would not necessarily mean an increase in the farm fire loss but the size of this increase, in the absence of any pronounced city conflagration, suggested a general increase. More tangible was the evidence that a group of large stock insurance companies, with special farm departments, found an average increase in their farm fire losses for the first 10 months of 1943 of something over 15 percent compared with their last year's losses. Finally, a sample

survey of the loss experience of 45 relatively large farm mutual fire-insurance companies fairly well scattered over the United States revealed that these mutuals, with an aggregate of nearly 1½ billion dollars of insurance in force, showed a net weighted average increase of 14.4 percent in their losses for the first 10 months of 1943 over the losses for the corresponding period of 1942. After rough allowances for a number of less tangible elements in the evidence—including the fact that the sample data showed that loss increases had occurred principally in the States of the Middle West and that several of these States were somewhat disproportionately represented in the sample—the net indicated increase was placed by the committee at the rather conservative figure of 12½ percent.

THE estimated 10-million-dollar increase in the farm fire loss of 1943 above that of 1942 represents, of course, an increase in the dollar volume of loss and this should not be interpreted to mean a corresponding increase in the physical amount of farm property burned. The prices of things that farmers buy for living and for production purposes were about 10 percent higher in July 1943 than in July 1942 and farm wages were 36 percent higher. Insurance losses often call for adjustments that involve material and wages in about equal amounts. In such instances a given loss which was properly adjusted for \$100 in July of 1942 would call for \$123 in July 1943. To take a more striking example of how price changes may affect insurance losses, an average milk cow in the United States which was killed by fire or lightning in July of 1934 meant a loss, according to available price statistics, of \$32.20. In July of 1942 an identical cow similarly killed meant a loss of \$88.80; and in July 1943 it meant a loss of \$118.

It is obvious, therefore, that in any period of rising prices an increase in dollar losses may or may not mean an increase in the physical volume of loss.

The present indicated increase in the farm fire loss may apparently be charged in full to change in the price level. It might even plausibly be argued on the evidence at hand that there was some further drop during 1943 in the volume or quantity of farm property destroyed by fire.

**I**N attempts to explain the recent dollar increase in the farm fire loss, the price factor has often been entirely overlooked. With this factor allowed for, there is apparently no real increase to explain. Nevertheless, the causes cited may be active factors in making the fire loss what it is. Among the factors tending toward an increase are inexperienced and often careless labor on the farm to replace better qualified workers called to the armed forces or attracted to war industries, postponement of needed repairs, neglect of good "housekeeping" in and about the home by reason of the crowded production activity, a bad lightning season in certain parts of the country, and various other factors.

On the other hand, certain forces are at work which should tend to lower fire losses. Among these is the widespread consciousness, which has been stimulated by insurance companies as well as by public agencies, that a fire loss in the present emergency is a

greater disaster than in normal times. Replacement of lost property is difficult, if not impossible, by reason of wartime restrictions and of actual shortages of material as well as of labor. It is now very obviously unpatriotic, as well as reckless from a personal point of view, to tolerate needless physical hazards or acts of carelessness that may bring about loss. Finally, with prices tending strongly upward, the temptation and opportunity for unscrupulous persons to profit by the criminal burning of insured property should for the present be largely absent.

**A**PPARENTLY, during 1943 the various new factors that tended to increase farm fire losses were approximately offset by other new or strengthened factors that tended to reduce them. The result was that while the dollar volume of loss moved up some 12½ percent, the increase was no greater than can be charged entirely to price advances. Hence, farmers may properly take satisfaction from the evidence that, in spite of their mounting difficulties, the farm fire loss in terms of physical property was apparently no greater in 1943 than it was in 1942 and may have been somewhat less.

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## Milking Machines Are War Tools

**M**ILKING machines have played an important part in helping dairy farmers increase wartime milk production to peak levels by making possible increased cow numbers. They have taken the place of men who went to war, and helped those who lacked physical strength and experience to milk by hand. Without these machines many darymen would have long since reduced their cow numbers and turned to lines of production requiring less work.

On January 1, 1942, there were about 253,000 milking machines on

farms. Their usefulness was immediately recognized as a serious labor situation soon developed on dairy farms. Relatively large quotas of materials for milking machines were provided for by the 1942 and 1943 machinery programs, and the number of installations on farms rose to about 330,000 in 1943. An additional net increase of about 40,000 units is in prospect for 1944.

Because of the large purchases of milking machines in the years immediately before the war, a large number of those now on farms are not old.



Table 1.—Labor Savings by Milking Machines of Specified Sizes, United States, February 1943<sup>1</sup>

Size of machine <sup>2</sup>	Average number of cows milked per herd per day		Labor required per herd per day for—		
	Total including cows milked by hand	With machine only	Machine milking (includes caring for machine)	Milking by hand <sup>3</sup>	Labor saved per day by milking machine
	Number	Number	Hours	Hours	Hours
1-cow.....	10.8	9.6	2.07	3.15	1.08
2-cow.....	17.1	15.9	2.67	4.55	1.88
3-cow.....	29.2	27.7	4.11	7.71	3.60
4-cow.....	30.9	29.1	4.62	8.73	4.11
5 and 6 cow.....	50.8	47.1	6.70	13.89	7.19
7 cow and more.....	114.5	105.9	17.28	30.75	13.47

<sup>1</sup> The above material is based largely on information obtained in February 1943 from more than 1,750 crop correspondents who owned milking machines.

<sup>2</sup> Indicates number of cows that can be milked at 1 time with machine. A 2-cow machine may be 2 single units or 1 double unit.

<sup>3</sup> Amount of labor that would have been needed to milk by hand methods the same cows that were machine milked.

On January 1, 1943, about 46 percent of the milking machines were 3 years old or less and 69 percent were 8 years old or less. Only 8 percent were 19 years old or more.

Milking machines are not a new invention. They have been used to some extent in Europe for about 100 years, and in this country for at least 40 years. Their early use in this country was largely experimental, and even in later years their use met with varying degrees of success. Some farmers have used them successfully for many years; others have been dissatisfied with their results, discarded them, and returned to hand milking. Present day machines, however, have been greatly improved over the earlier models. Dairy men have become more proficient in using them, and their increased use in dairy centers has tended to insure better and quicker servicing at more moderate cost.

**SANITATION** is of prime importance in dairying, and the extensive use of chemicals for cleaning the machines, either with or without hot water, has contributed greatly to the production of milk with low bacterial count. Then, too, many dairy men select replacement cows that are suited

for machine milking, which tends to decrease the time required to milk with machines. Hand stripping after using the machine is considered much less essential than at first; in fact, many dairy men have almost completely eliminated this practice. Moreover, milking time has been reduced greatly as farm experience and experimental data showed that many machines had been left on the cows longer than necessary. Increased attention to these things by the milking machine industry and by State and Federal agencies has contributed much toward instructing farmers in the essentials of machine milking. But labor shortages and increased wage rates have been very important factors in the recent increased use of milking machines.

**MILKING** machines used under favorable conditions are big labor savers. According to a survey by the Bureau of Agricultural Economics, 75 percent of the machines on farms were used each day in 1942, and the yearly average for all machines was 320 days. Annual usage of milking machines in 1941 was estimated to average 684 hours per machine. This is higher than for any other important farm

machine. The average farm tractor is used only about 500 hours per year, and cream separators, large combines, and manure spreaders are used only about 140 hours each.

The average savings over hand milking for all milking machines reported approximated 2½ hours of labor per day of use, or an annual labor saving of more than 700 man hours per machine.

National labor needs for the milking operation alone are tremendous. The milking job must be performed on more than 4 million farms about twice each day. In 1943 this operation required an average of about 6 million hours each day, or a total of about 2 billion hours for the year. With the machines in use in 1943, labor needs for milking were at least 210 million hours less than would have been needed if all milking had been done by hand.

Labor saved by machine milking varies from farm to farm, depending largely on the size of the machine and the size of the cow herd. Machines adapted for milking only one cow at a time save only slightly more than 1-hour per day of use. Labor savings for other machines tend to vary from

this amount about in direct proportion to the size of the machine (table 1).

The real savings in labor are found in the large dairy herds. Thus, for the popular two-cow machine, daily labor savings were about seven times as high for the largest herds as they were for the smallest herds reported on in the 1943 survey (table 2).

Various milking machine studies indicate that savings in labor for cow herds of less than 10 in number are usually not sufficient to justify the purchase of a machine. There are, of course, some savings in labor but the value of the savings in most instances is probably not sufficient to offset the additional costs involved in operating a machine. However, on some farms, and especially at the present time, consideration other than expense may well be important. Hand milking requires skill and strength if a good job is to be done. With relatively aged or inexperienced workers machine milking may be necessary if the job is to be done, even though relatively high costs for milking are incurred.

**F**URTHER expansion in the number of milking machines on farms appears to be in prospect, at least

Table 2.—Influence of Herd Size on Labor Saving by Two-Cow Milking Machines, United States, 1943<sup>1</sup>

Range in herd size	Average number of cows milked per herd per day		Labor required per herd per day for—		
	Total including cows milked by hand	With machine only	Machine milking (includes caring for machine)	Milking by hand <sup>2</sup>	Labor saved per day by milking machine
Number cows milked:	Number	Number	Hours	Hours	Hours
8 and less.....	6.9	6.6	1.35	1.98	0.63
9 to 13.....	11.2	10.6	1.97	3.18	1.21
14 to 18.....	16.0	15.1	2.61	4.35	1.74
19 to 23.....	20.7	19.4	3.05	5.42	2.37
24 to 28.....	25.4	23.5	3.59	6.11	2.52
29 and over.....	33.1	34.5	5.23	9.75	4.52
All herds.....	17.1	15.9	2.67	4.55	1.88

<sup>1</sup> See footnote 1, table 1.

<sup>2</sup> Amount of labor that would have been needed to milk by hand method the same cows that were machine milked.

until the farm labor situation becomes more normal. Even in 1943 the number of milking machines on farms in the United States was estimated to be equivalent to about 48 percent of the number of farms having 10 or more cows and heifers kept for milk. (Some farms with less than 10 cows have milking machines, and the percentage of farms with 10 or more cows that actually had machines would be somewhat less than 48.) Milking machines are more numerous in relation to herds of 10 or more cows in the North Atlantic States, the Lake States, and the Pacific Coast States. The great bulk of milking machines are on farms in the commercial dairy areas of these States where fluid milk is sold either for market use or for processing.

**R**ESUMPTION of farm electrification is likely to result in increased use of milking machines in many areas where they are now used to only a limited extent. Better barns and increased attention to machine sanitation will result in better machine performance and probably bring about wider use. For best results machines must be in top working condition. Thorough cleaning and rather frequent servicing is needed to keep them in such condition. It is less expensive to service milking machines in areas where the machines are numerous and close together than in areas where machines are few and widely scattered.

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## Stabilization of Farm Wages

**S**INCE November 30, 1942, control of agricultural wage rates has been in the hands of the Secretary of Agriculture and the War Food Administrator. In the regulations of that date agricultural labor was defined so as to exclude all workers engaged primarily in preparing agricultural commodities for market, or in delivering them to market.

Without the approval of the War Food Administrator, farmers, under the regulations, might not decrease wages or salaries paid for a particular kind of work below the highest rate paid for that work between January 1, 1942, and September 15, 1942. Farm wages and salaries might be increased, however, up to the level of \$2,400 per annum without the necessity of securing approval, "unless and until the War Food Administrator determines and gives public notice of his determination, that, with respect to areas, crops, classes of employers or otherwise, increases in salaries or wages for agricultural labor may no longer be made without (his) approval."

The reasons given for placing farm

workers in this special category were (1) "that the general level of salaries and wages for agricultural labor is substandard," (2) "that a wide disparity exists between salaries and wages paid labor in agriculture and salaries and wages paid labor in other essential war industries" and (3) "that the retention and recruitment of agricultural labor is of prime necessity in supplying the United Nations with needed foods and fibres."

**D**URING the period of more than a year that agricultural wage rates have been under the jurisdiction of War Food Administration, what has been done towards stabilization has been at the insistence of certain groups of producers who were interested primarily in the orderly utilization of the labor supply rather than in taking measures designed to prevent inflation. However, as the 1943 season wore on, it became increasingly clear that in numerous instances, farm wages were rising to such a degree as to cause dislocations in food processing and non-agricultural wage arrangements. The

processing industry has complained about the difficulty of keeping workers in the plants because of the high wages paid in the fields. In November 1943, the Denver War Labor Board issued a resolution stating that uncontrolled increases in farm labor rates made impossible the stabilization of other wage rates. It noted that regular farm labor in Idaho was receiving from \$125 to \$175 per month with house, garden, dairy products, etc., provided free, that common farm labor was frequently receiving \$1 per hour and workers in specialty crops as high as \$1.50 to \$2.10 an hour. Accordingly the Denver Board urged the National War Labor Board either to bring about closer cooperation between the office of the War Food Administrator and the regional war labor boards or to entrust the stabilization of farm wages to the National War Labor Board.

**D**URING the war, farm wage rates have indeed risen rapidly. In the spring of 1943, the farm wage rates index passed the highest point previously recorded, namely that reached during the 1920 boom period. From an index of 129 percent of the 1910-14 average in July 1940, farm wage rates rose to an index of 280 by October 1, 1943, an increase of 117 percent. The 60-point increase since October 1, 1942, represented the greatest rise ever recorded within a year's time; in the Pacific region the rise was 72 points.

Farm wage rates, however, started from a relatively low level as compared with farm incomes or industrial wage rates and in the second half of 1943 were still "substandard." It is doubtful whether at the end of 1943 the average ratio for the year between farm wage rates and total net farm income will exceed the ratio in 1935-39, a period characterized by large rural and urban unemployment and by restricted migration of farm people to nonfarm areas. Figures of the Bureau of Labor Statistics show that on September 1, 1943, average earnings in all manufacturing industries were 99.3 cents per

hour, \$7.40 per day and \$44.39 per week. At the nearest comparable date for which statistics of the Bureau of Agricultural Economics are available, October 1, 1943, average hourly earnings of hired farm workers were 34.8 cents, average daily earnings were \$3.51 and average weekly earnings were \$17.15. Even the lowest paid of the manufacturing industries, namely cotton goods manufactures and cottonseed crushing, were well above the agricultural wage level. At these same dates, hourly farm wage rates were only 47 percent of the wage paid for common labor in road building in the United States, while daily rates on the farm were only 58 percent of those paid on the roads. The difference was least on the Pacific Coast, in the Mountain States, and in the West North Central States; it was greatest in the East South Central States.

Despite the fact that farm wages as a whole were still "substandard," there were numerous instances of agricultural workers making very high earnings. Such cases were, for the most part, in connection with seasonal operations or those associated with semispeculative ventures. Asparagus cutters and packers in California were making average earnings of \$18 to \$20 a day in April 1943, before the wage stabilization program went into effect. Numerous cases of earnings ranging from \$30 to \$54 a day were reported. In Maine, potato pickers received from \$12 to \$15 a day; similar earnings were reported for such work in North Dakota and Idaho and for bean picking, fruit picking, and topping of sugar beets, elsewhere.

**T**HE situation arising out of the high wage rates paid asparagus workers in the central Delta area of California in the spring of 1943 gave rise to the first wage stabilization program. Wage rates so high as to discourage the harvesting of asparagus were associated with a chaotic condition of the labor market, with

inefficiency on the part of workers and loss of time due to "shopping around" for jobs. "Pirating" of labor by one employer from another was a common cause of dissension within the industry. Wages were out of line with those in other agricultural occupations.

The degree of success attained in the asparagus wage stabilization program, which was instituted on April 12, 1943, led to demands for wage ceilings on the part of growers of other crops, particularly tomatoes and grapes. The results of the asparagus experiment, however, were obviously due, at least in part, to rather special conditions in that industry. Asparagus production for the market was concentrated in five counties in the San Joaquin-Sacramento Delta. The number of growers was relatively small and they were well organized. The work was of a rather specialized sort. The workers were an unusually homogeneous group, some 80 percent of them being Filipinos. Moreover, they were well organized and were employed to a considerable degree under the direction of labor contractors. On the other hand, tomato growing on a commercial scale was carried on in much more widely scattered areas, under widely varying conditions, by growers who were as diverse as agricultural producers could well be, using workers who ranged all the way from high school children to migrants who made a business of following the crops. Yields varied much more than with asparagus. Competition for labor with growers of other crops, especially grapes, was keen.

On August 24, 1943, maximum rates were established for tomato pickers in 13 counties in California. Later, 7 counties were added. On August 26, maximum rates were established for pickers of sun-dried raisin grapes in 8 counties. Finally on October 8, 1943, a ceiling was placed upon rates for cotton picking in 6 counties.

**A**LTHOUGH detailed reports on the California experience have been issued only with reference to the

asparagus program, it appears that the asparagus, tomato, raisin grape, and cotton programs won general approval. Labor turn-over was reduced. Efficiency of labor on the job was increased. A large part of the canning tomato crop was picked at rates below the ceiling. How much of this was due to the wage stabilization program is an open question. The employment of a considerable number of Mexican nationals in California undoubtedly had an influence.

On November 27, 1943, the Administrator issued an order relating to maximum wage rates for picking oranges, tangerines, and grapefruit in Florida. Hearings were held in the Belle Glade vegetable area in the same State, with a view to setting rates for bean picking; to date no order has been issued.

**T**HE procedure followed in stabilizing agricultural wage rates has differed from that in use in the case of nonagricultural wages. In the latter instance, wages were "frozen" at the point attained on September 15, 1942. Thereafter no wage increases might be made without the specific approval of the War Labor Board, except in the case of wages below a certain minimum (at present 50 cents per hour) which were held to be substandard. The program of the War Labor Board is therefore one of administering changes from a given position, through the application of such principles as the Little Steel Formula, the need for the correction of obsolete and chaotic wage structures, etc. In the case of agricultural wage rates, the application of any such general freeze order encounters insuperable difficulties, owing to the scattered and highly individual nature of farm employment, the informal and unstandardized character of farm employment contracts, farm wage rates and farm jobs, and the fact that on any given date many seasonal tasks would not be in process and would

therefore not be included. At any given date, the prevailing farm wage structure would not provide a sufficiently definite and recognized basis to permit administration of a wage stabilization program like that administered by the War Labor Board in industry.

It appears therefore that a farm wage stabilization program requires the determination by some authority of base stabilization rates for specific operations. These base rates have to be determined in the light of comparable farm rates in the area for other work of similar grade, comparable non-agricultural rates, the amount of perquisites involved, the farm labor supply situation, past levels and trends, growers' ability to pay and other such factors. The base rate must facilitate the obtaining of sufficient labor and yet not be such as to be inflationary.

That this task is a matter of some complexity is obvious. Many different rates and methods of wage payment are to be found for the same operation. Harvest containers vary in size and weight. Compensation may be by the piece, by the hour, by the day or by a combination of these. Bonus payments and the provision of varying amounts of perquisites complicate the situation.

FOR the purpose of carrying out the wage stabilization program, the War Food Administrator has designated State wage boards made up of persons competent to deal with wage questions. In California all four mem-

bers of the boards, and in Florida, three of the five members, are Federal employees. Nominations were sought from the State directors of Extension. In both Florida and California, the War Manpower Commission is represented; in both, too, the Chairman of the State Agricultural War Board is a member; in California he is chairman of the wage board. The wage board has the responsibility of holding hearings to secure evidence with respect to establishing maximum wage rates and of making recommendations to the War Food Administrator. To this board also is delegated authority to make adjustments in cases in which, in its judgment, modification of the Administrator's order is necessary in order to avoid undue hardship. In California such adjustments are made only upon a recommendation to the State board from a county adjustment committee composed of representatives of growers and of laborers. The State wage board also has responsibility for the administration and enforcement of the wage stabilization order. In both California and Florida, these duties are carried out with the active cooperation of the State and county war boards.

It is probable that in 1944 wage boards will be established by the War Food Administration in all States in which there were unduly high farm wage rates in 1943 or in which there is reason to expect that such rates will appear during the coming season.

WILLIAM T. HAM, *Bureau of Agricultural Economics*

## Agricultural Transportation Problems

PUBLIC carriers are now hauling the greatest volume of freight in history. Only during the last war did produce hauling approach current heights. While the number of trucks has risen, there are only three-fourths

as many locomotives and freight cars on the rails today as in 1918. The American transportation system is now facing the most severe strain in its existence.

Transportation difficulties grew

markedly from 1942 to 1943. Trucks and rolling stock were a year older, with little prospect of replacement. Only stringent rationing of gasoline to private cars and nonessential trucks allowed adequate fuel supplies for commercial truckers. As the stockpile of natural rubber faded, synthetic tires began to be introduced. As proven adequate for light driving, synthetic tires will be used more and more on commercial trucks but will necessitate lighter truck loadings and gentler treatment on the road. Replacement parts and repair facilities grew scarcer during 1943.

A shift from truck and boat to rail transportation of farm commodities for domestic use continued in 1943. Aside from instances such as the Bari disaster, ocean shipping prospects seemed brighter—largely owing to the successful antisubmarine campaign. Meanwhile, domestic land transportation of farm products became more difficult. Increased agricultural production strained transport facilities. The seasonal peak flows of livestock, and of perishable fruits and vegetables, introduced occasional bottlenecks. In some sections of the southeast where country assembly facilities were inadequate, the disappearance of itinerant truckers made it virtually impossible to haul all of certain fruit and vegetable crops to market.

**T**HE tight supply of rolling stock may be alleviated by the projected construction of at least 30,000 boxcars. The refrigerator-car situation remains troublesome. To some degree, wasteful use of facilities still prevails: cross-hauling, excessively long truck haul, occasional idleness of railroad cars, and the hauling of empties westward were but little reduced in 1943. Farmers operating their own trucks found it difficult to bring their produce to assembly points and markets because of the shortage of help, fuel, mechanics, and replacement parts.

In response to the general pressure on transportation equipment, certain new techniques were developed. Freight cars were more heavily loaded in 1943 than ever before. The holding of refrigerator cars for reconsignment was prohibited wherever possible. To avoid waste, refrigerator cars were loaded with nonperishable produce traveling west to insure a more adequate supply of refrigerated transportation for the western fruit and vegetable crops. Refrigeration was standardized and reduced. Circuitous routing was restricted. Naturally enough, military necessity sometimes compelled abandonment of these economies in transportation service.

**P**EAK rail movement of cattle and sheep from western ranges into feedlots occurred in October, and the heavy truck movements of hogs to slaughter came in November and December. Truck facilities for livestock were estimated at 80 to 85 percent of those available in the winter of 1942-43. But pick-up service has improved, cross-hauling has decreased, and trucks are more fully loaded. Owing to the reduction in trucks, there has been a shift in livestock movement from truck to rail. The winter peak of livestock marketing is straining railroad capacity. Corollary to this, the transportation bottleneck has tended to make the seasonal livestock marketing period longer than usual. Railroad tonnage is estimated to be 6 percent greater for the winter of 1943-44. There seems to be an adequate supply of refrigerator cars for shipping animal products though not of packer-owned cars alone. To conserve locomotive power, these cars are being loaded more heavily.

Fresh fruits and vegetables, being perishable, demand speedy handling, hauling, and refrigeration en route. Country terminal facilities for fruits and vegetables are generally adequate. Country terminal labor is not an acute problem since most marketing is done by the producers. There has been a

shift away from sales to the vanishing itinerant trucker, and most fresh produce is now sold through country terminal facilities.

Truck transportation in general, and long-distance hauling of fresh fruits and vegetables in particular, grows increasingly difficult. Mechanical breakdown is becoming an ever more important factor in the truck situation. An even greater shift from truck to rail transportation is in the offing. Delivery from major terminals to secondary distribution points is being curtailed, in order to conserve existing heavy truck equipment.

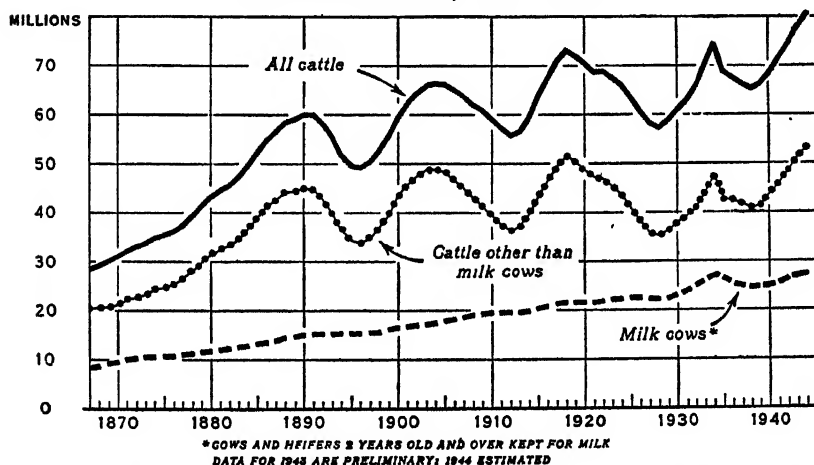
Central market terminal facilities are adequate, for the most part, with labor shortage the most disturbing component. Because of the restricted supply of rail equipment, it is more important than ever to unload cars promptly. This economy of car use is impaired because of the shortage of terminal labor.

Difficulty has also been experienced in the truck delivery of eggs, and in finding a sufficient number of moistureproof boxcars for the preservation of grain in transit. Boom production of crops, such as the record 1943 potato season, has caused a serious shortage of storage facilities. When a large portion of the Maine crop must be transported by rail to storage locations before it is marketed, added strain is located on the railroads.

**W**HILE so vital a product as food has a high priority on transportation space, 1944 will see as many food transportation difficulties as in 1943. The 30,000 new boxcars may allow some easing of the rolling stock situation, but most factors of the transportation problem have a gloomier outlook.

A. PETER RUDERMAN, *Bureau of Agricultural Economics*

**ALL CATTLE: NUMBER ON FARMS JANUARY 1,  
UNITED STATES, 1867-1944**



U S DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) <sup>1</sup>	Income of industrial workers (1935-39=100) <sup>2</sup>	Cost of living (1935-39=100) <sup>3</sup>	1910-14=100					Firm wage rates
				Whole-sale prices of all commodities <sup>4</sup>	Prices paid by farmers for commodities used in—			Prices paid, interest and taxes	
					Living	Pro-duction	Living and pro-duction		
1925	90	126	125	151	163	147	150	169	176
1926	96	131	126	146	162	146	155	168	179
1927	95	127	124	139	160	144	153	166	179
1928	99	126	123	141	160	148	155	168	179
1929	110	134	122	139	159	147	154	167	180
1930	91	110	110	126	150	141	146	160	167
1931	75	84	109	107	128	123	126	142	130
1932	58	58	98	95	108	109	108	124	96
1933	69	61	92	96	108	108	108	120	85
1934	75	76	96	109	122	123	122	129	95
1935	87	86	93	117	124	127	125	130	103
1936	103	100	99	118	123	125	124	128	111
1937	113	117	103	126	128	136	131	134	126
1938	89	91	101	115	122	125	123	127	125
1939	109	105	99	113	120	122	121	125	123
1940	125	119	100	115	121	124	122	126	126
1941	162	169	105	127	131	131	131	133	154
1942	199	238	118	144	154	149	152	151	201
1942 October	215	262	119	146	158	151	155	154	220
November	220	271	120	146	160	151	156	155	-----
December	223	278	120	147	162	153	158	156	-----
1943 October	* 247	318	124	150	172	167	170	166	280
November	245	-----	124	150	173	169	171	167	-----
December	-----	-----	-----	-----	174	170	172	168	-----

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	All groups	
1925	137	177	172	153	141	153	163	150	92
1926	131	122	135	143	147	152	150	145	86
1927	128	128	144	121	140	155	144	139	84
1928	130	152	176	159	151	158	153	149	89
1929	120	144	141	149	156	157	162	146	87
1930	100	102	162	140	134	137	120	126	79
1931	63	63	95	117	92	103	100	57	61
1932	44	47	82	102	63	83	82	65	52
1933	62	64	74	105	60	82	75	70	58
1934	93	99	100	103	68	95	80	90	70
1935	103	101	91	125	117	108	117	109	83
1936	108	100	100	111	119	119	115	114	89
1937	126	95	122	123	132	124	111	121	90
1938	74	70	73	101	114	109	108	95	75
1939	72	73	77	105	110	111	91	92	74
1940	85	81	79	114	116	113	96	98	78
1941	96	113	92	144	141	131	122	122	92
1942	119	155	125	190	190	152	151	157	104
1942 October	117	159	134	226	200	165	173	169	110
November	117	160	127	238	197	171	178	169	100
December	124	162	111	293	196	175	183	178	114
1943 October	162	171	197	264	203	197	212	192	116
November	163	165	207	295	192	190	217	192	115
December	170	168	231	245	192	191	210	197	117

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation. Revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation. Revised March 1943.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. \* Revised.

**NOTE.**—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

# SPRING PLANTING ISSUE THE AGRICULTURAL • SITUATION •

FEBRUARY 1944

*A Brief Summary of Economic Conditions*

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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WITH SPRING PLANTING almost at hand, farmers throughout the country are now making their final planting decisions for the greatest agricultural output in history. The 1944 agricultural goal calls for 380 million acres, the largest acreage ever planted in this country. Crop yield prospects for the whole country are not as favorable as at this time in 1942 or 1943, but are as good as in 1940 and 1941. In the eastern half prospects are favorable, and in the western part, where fall rains were below normal, winter snows have improved prospects, but some areas are still very dry. Farm equipment and supplies will be more available than in either of the 2 past years, with many items removed from rationing restrictions. Farm labor programs of 1943 will be carried out more intensively and on a wider scale to provide more and better skilled labor when needed. A victory garden goal of 25 percent more output from 10 percent more gardens means larger and more fully utilized gardens in 1944. And electric pig brooders contribute to better pig-crop yields by increasing the number of pigs saved by at least 10 percent.

# Commodity Reviews

## GRAIN STOCKS

**T**OTAL stocks of corn and oats on January 1, and barley on December 1, including farm, Government, and terminal market stocks, amounted to 72.6 million tons. A year ago stocks of these three leading feed grains amounted to 85.9 million tons; the 5-year average (1938-42) for January 1 is 72.1 million tons. This year's total is distributed as follows: Corn—2,008 million bushels as compared with 2,816 million bushels a year earlier; oats—725 million bushels as compared with 891 million bushels last year; and barley on December 1—200 million bushels as compared with 282 million bushels on December 1, 1942.

Disappearance of the 1943-44 supply of feed grains, including grain sorghums, in October-December totaled 48 million tons compared with 45 million tons in the same period of 1942.

Approximately 285 million bushels of wheat were consumed as feed during the last half of 1943. Indications are that about 185 million bushels will be available between January and June of this year, the total quantity depending partly on imports.

While exact data on the disappearance of high-protein feeds are not available, it apparently was slightly larger in the last quarter of 1943 than a year earlier. Total supplies for the 1943-44 marketing year are estimated to be 11.4 million tons, which, although slightly larger than the supply a year ago, will not allow for as large consumption per animal unit.

Except in the drought areas of the Eastern and South Central States, hay supplies are believed sufficient. Comparatively large shipments of hay have been sent into eastern areas, but some feeders, particularly in the east, have nevertheless found heavier grain feeding necessary this winter.

Livestock numbers are likely to be reduced to some extent during the bal-

ance of the current feeding year. But with a record number on farms January 1, the total number to be fed this season probably will exceed the number fed in 1942-43. With a slightly smaller total supply of feed concentrates available for the season as a whole, the carry-over at the end of the season for each feed is likely to be substantially lower than at the beginning. The quantity of concentrates fed per animal unit also may be reduced from the comparatively high rate of feeding in 1942-43.

## LIVESTOCK

**T**OTAL meat output in 1944 is now estimated at 25 billion pounds dressed weight, 8 percent more than the preliminary production estimate of 23.2 billion pounds for 1943. Larger pork supplies in prospect primarily account for the increase. A large proportion of record size 1943 pig crops—which totaled almost 122 million head—will be marketed for slaughter in 1944. In addition, a reduction in breeding sows is in prospect. Cattle slaughter will probably be higher than the estimated 17 million head slaughtered in 1943. However, a lowered slaughter of lamb and mutton is anticipated.

Present estimated meat production of last year represents an increase of nearly 2 billion pounds over the total produced in 1942. This increase also was due mostly to a larger hog slaughter; beef production was moderately lower in 1943 than in 1942.

About as much meat as last year is expected to be available to civilians this year. And further, if meat reserves, set up for contingencies, are allocated to civilians, there would be more meat per capita than is accounted for in present estimates.

Federally inspected hog slaughter in 1943 was 18 percent greater than in 1942. Market congestion was caused by large hog receipts at the end of the

year. Imposition of short-time embargoes on shipments of hogs to terminal markets, plus heavy hog receipts which taxed slaughtering capacity, caused farmers to keep many butcher hogs on farms longer than usual.

Cattle and calf slaughter in December decreased 10 percent from November but was 19 percent greater than in December 1942. Federally inspected cattle slaughter during 1943 was 5 percent under that of 1942, and calf slaughter under Federal inspection in 1943 was 10 percent less than in 1942.

With the exception of prices for cows, which first declined and then rose sharply, prices of all slaughter cattle at Chicago showed little change from early November to mid-January.

Sheep and lamb slaughter under Federal inspection in 1943 was 8 percent higher than 1942. Chicago lamb prices on January 15, 1944, were about 1 dollar above early December.

## DAIRY PRODUCTS

**T**OTAL 1943 milk production is now estimated at 118.2 billion pounds, the second highest on record and only slightly under the record production of 119.2 billion pounds in 1942. The number of milk cows on farms in 1943 was greater than in 1942, but milk output per cow declined, averaging 12.15 pounds on January 1, 1944, as compared with 12.79 pounds a year earlier and 11.91 pounds for the 10-year (1933-42) average.

Only 64 percent of the cows were being milked on January 1, the lowest percentage since 1925. This abnormal decline in the number of cows being milked, began in mid-summer, and reached its low point in November. The subsequent seasonal upturn in milk production, however, has been approximately normal. But the rate of December production, adjusted for normal seasonal variation, would result in an annual output of only 115 billion pounds.

Fluid milk and butterfat prices now are higher than a year ago. Dairy

farming returns have been increased also by the dairy production payment, this payment about doubling the increase in dairy returns over a year ago. There has been a certain amount of increase in the January rate of production payments over the last quarter of 1943. For fluid milk the national average payment will increase 3 cents per hundred pounds; for butterfat, it will probably increase almost 1 cent per pound. During January production payments averaged 38 cents a hundredweight for milk and 5.2 cents per pound for butterfat. Feed costs have increased materially during the year, while the quality and quantity of feed supplies declined somewhat.

In the North Atlantic States the daily average production per cow on January 1 was lower than last year and also lower than the 10-year average in nearly all states in the area. Fewer cows in production, poor quality roughage and concentrate problems of deficit feed producing areas were largely responsible. In the South Central States reduced production was also notable—3 percent below the 10-year average and 6 percent below January 1, 1942—due to unfavorable weather in December and feed shortages in states where drought conditions occurred last fall.

In other regions the usual seasonal changes took place between December 1 and January 1, except for a contra-seasonal rise in the South Atlantic area, and a decline in production of 8 percent per cow from January 1, 1943, in the West North Central region.

## INCOME TAXES

**A**T LEAST one-third of a billion dollars was paid in Federal income taxes in 1943 by the several million farmers with incomes high enough to make them liable for the tax. Under the pay-as-you-go system those payments cover a large share of the Federal tax due on 1943 income. But a final and complete return must be filed on or before March 15, 1944,

to establish the exact tax liability for 1943. If this return shows that the payments during 1943 were not large enough, the unpaid difference must accompany the return.

Two of the major differences in this year's return deal with (1) the new Victory tax, and (2) how to make the adjustments necessary for changing over to a pay-as-you-go basis. The Victory tax is an additional income tax which is computed much like the regular income tax except that fewer deductions are permitted. The adjustment provision deals with the computing of the "forgiven" part of the tax in order to save the taxpayer the burden of paying 2 years' income tax in 1 year.

Because of these new provisions in the income tax, farmers will want to begin organizing the information about their financial affairs as soon as possible. If the blank forms have not yet been received they are usually available at banks, post offices and similar places, as well as from internal revenue collectors.

The several million farmers who will have to file returns on or before March 15 fall into four groups: (1) Those single persons whose 1943 gross incomes were \$500 or more, (2) married persons whose individual 1943 gross incomes were \$624 or more, (3) husbands and wives whose combined 1943 gross incomes were \$1,200 or more, and (4) those who paid or owed a tax on 1942 income regardless of the 1943 income.

## POULTRY AND EGGS

**S**HARP declines in wholesale egg prices have occurred in recent weeks. In mid-January wholesale prices of most grades were at levels prevailing a year earlier, and were well below ceiling levels. Between December 16 and January 21, egg prices at Chicago dropped 4 to 7½ cents per dozen; in New York price declines were even more pronounced. Altogether, the extent of egg price de-

creases in this period is moderately larger than that experienced between January 9 and 15, 1943, when egg marketings also increased sharply.

December egg production set a record for the month, being 6 percent higher than a year ago and 73 percent above the 10-year average (1932-41).

Marketings of chickens have shown a marked decrease from the seasonal peak encountered late in 1943, and demand is greater than supply in most poultry markets. Seasonal low levels for marketings will continue from February through April.

## TRUCK CROPS

**P**RODUCTION of winter season truck crops this year is expected to exceed all records, with 1,408,000 tons in prospect. This is 37 percent higher than 1943 and 53 percent over the 10-year (1933-42) average. Estimated acreage in these crops is 28 percent greater than last year.

Percentage increases in production of twelve crops range from 14 percent in the case of snap beans to 130 percent for green peas. The cabbage crop accounts for approximately three-fifths of the total increase in the aggregate vegetable tonnage. Only four winter vegetable crops are likely to be smaller than last year's—carrots, artichokes, eggplant, and green lima beans. The green pepper crop is expected to remain about the same.

Considered altogether, the intended acreages of Florida watermelons, spring onions, early spring cabbage, asparagus and shallots are 15 percent higher than in 1943, but decreased asparagus and shallot plantings are in prospect.

Ample market supplies of cabbage, escarole, lettuce, and spinach are indicated during the next few weeks, while moderate supplies of snap beans, beets, carrots, cauliflower, celery, and kale are in prospect. Onion marketings will continue below a year ago, and supplies of other vegetables will not be sufficient to meet the demand despite increased production.

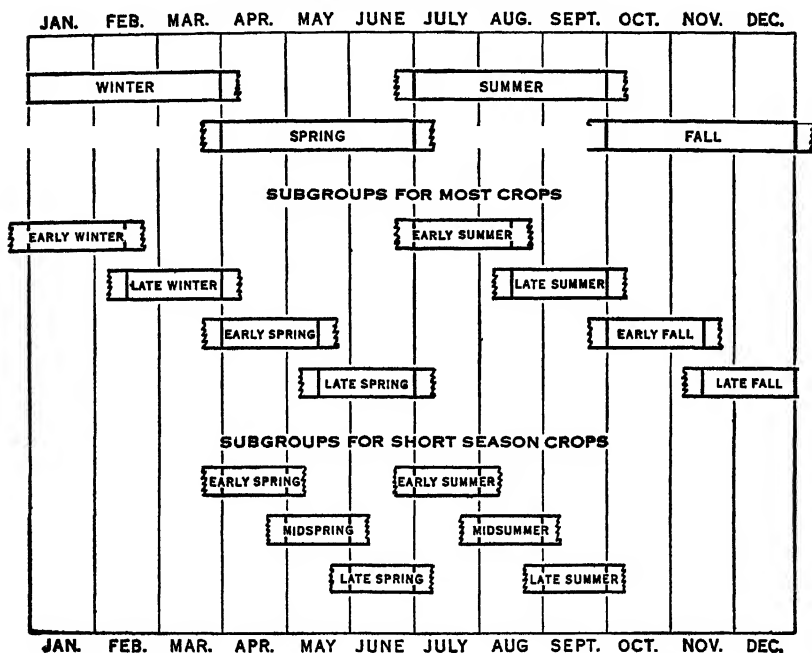
Estimated per capita civilian consumption of commercial truck crops raised for fresh market shipment in 1943 was approximately 17 percent under 1942. This was due to a 7 percent decrease in production from the

previous year and to larger allocations to noncivilian groups. Only snap beans, kale, and carrots were more plentiful than in 1942.

Civilian per capita consumption of commercially canned vegetables during

## NEW SEASONAL GROUPINGS OF COMMERCIAL TRUCK CROPS FOR FRESH MARKET

(ON BASIS OF MOST ACTIVE HARVESTING PERIOD)



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

Commercial truck crops are grown and harvested in some section of the country every month of the year. For the most part these crops are extremely perishable and must be marketed quickly to avoid waste. To be of most use in providing a basis for orderly marketing practices, production estimates have to be made at frequent intervals. In addition these estimates must indicate aggregate supplies and supplies of each crop to be available during a particular period.

The new seasonal groupings of truck crop estimates, shown in the chart, roughly correspond with the four seasons of the year. This new system has at least two important advantages over the old. The name of each group indicates the period when heaviest supplies of the crop are usually available so that it is relatively easy to interpret the reports in terms of total production of all commercial truck crops for a given period. Under the old nomenclature of early, second early, intermediate, and late, this was not always the case.

Because the new nomenclature will be more easily understood by the public than the old classification it should prove more useful in determining marketing operations, in estimating truck crop food supplies periodically, and in guiding government agencies in their allocation and purchase programs.

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Buying power of farm products <sup>1</sup>
1943			
January .....	182	157	116
February .....	178	159	112
March .....	182	160	114
April .....	185	162	114
May .....	187	163	115
June .....	189	164	116
July .....	188	165	114
August .....	193	165	117
September .....	193	165	117
October .....	192	166	116
November .....	192	167	115
December .....	197	<sup>2</sup> 169	117
1944			
January .....	( <sup>3</sup> )	169	( <sup>3</sup> )

<sup>1</sup> Ratio of prices received to prices paid, interest, and taxes.

<sup>2</sup> Revised.

<sup>3</sup> Revised series to begin in next issue

1943-44 will be approximately one-fifth smaller than the previous marketing year, but a little larger than the 1935-39 average. While production of truck crops for processing in 1943 was only 14 percent smaller than in 1942, noncivillian requirements were very large and record quantities of truck crops were frozen and dehydrated.

## TOBACCO

SO FAR this marketing season prices received by growers for nearly all types of tobacco have exceeded the high levels of 1942-43. Estimated total returns are about 550 million dollars, as compared with 510 million in 1942 and the previous record of 451 million in 1919.

Higher prices have been especially pronounced for dark and Maryland tobaccos, but substantial advances have also occurred for burley, and for some types of flue-cured and cigar tobaccos. Sales of flue-cured and most types of domestic cigar leaf have been completed, and markets for burley and dark tobaccos are now open.

Flue-cured tobacco, production of which totaled an estimated 790 million

pounds in 1943, brought an average of almost 40 cents a pound, the highest price since 1919.

Over 95 percent of the burley crop—about 364 million pounds—had been sold by January 27 at prices averaging 45.7 cents per pound, 4 cents higher than during the same period last year. Indications now are that new records will be set by the 1943 crop for season average prices, crop value, and average prices for many grades. All grades suitable for cigarette manufacturing have sold at ceiling levels, while some inferior grades were sold at prices considerably lower than the ceilings.

All dark tobaccos sold so far this season have brought much higher prices than in the corresponding period of 1942-43, due partly to the large consumption of snuff and plug chewing tobacco, improved export prospects, and the Department of Agriculture program for encouraging the use of low-grade dark tobaccos in the manufacture of nicotine sulphate and nicotine alkaloid.

Per capita consumption of leaf tobacco in this country probably reached an all-time high (about 9 pounds) in 1943. Cigarettes accounted largely for this, since consumption of cigars and smoking tobacco declined, as indicated by sales of revenue stamps. Largely as a result of increased domestic consumption of leaf, stocks of all major types of tobacco are below a year ago. Purchase of 1943 crops by manufacturers and dealers will not equal the season's disappearance of most types. Farm marketing quotas for 1944 have been announced by War Food Administration, as well as a 20 percent increase in acreage allotments for burley and flue-cured tobacco.

## WHEAT

WHEAT stocks on farms January 1 were estimated at 379 million bushels. This amount is 112 million bushels less than a year earlier, but

compares very favorably with the 10-year average (1933-42) of 227 million bushels. The disappearance of wheat from farms during the fall quarter totaled 140 million bushels, the third greatest disappearance since 1929.

The January 1 farm stocks represent 45 percent of production—5 percent less than on January 1, 1943, but 15 percent more than the average. Low farm stocks occurred mostly in South Dakota, Nebraska, Kansas, Oklahoma, and Texas, where the reduction represented 94 million bushels of the national total decline of 112 million bushels.

Farm stocks were larger than usual in relation to production this year in

the eastern half of the country and in certain parts of the Southwestern range, reflecting large inshipments of wheat. The estimate of total stocks of wheat, including those in other positions than on farms, became available late in January.

Wheat price fluctuations have been influenced by the extension of price ceilings, the flour subsidy, and Government flour purchases. Ceiling prices on wheat, formerly applicable only to soft wheat, were extended to cover all wheat on January 4, at levels reflecting 100 percent of parity to growers without taking soil conservation payments into account. Price ceilings include the usual commission charge of 1½ cents a bushel, and discounts and

### Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets, based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		January 1943	December 1943	January 1944	Parity price, January 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel) .....	dollars 0.894	0.837	1.175	1.43	1.46	1.49
Corn (bushel) .....	do .612	.601	.880	1.11	1.13	1.08
Oats (bushel) .....	do .399	.340	.525	.769	.775	.674
Rice (bushel) .....	do .813	.742	1.773	1.83	1.88	1.37
Cotton (pound) .....	cents 12.4	10.29	19.74	19.85	20.15	20.96
Potatoes (bushel) .....	dollars .607	.717	1.179	1.35	1.41	1.22
Hay (ton) .....	do 11.87	8.87	11.20	15.20	15.70	20.10
Soybeans (bushel) .....	do 1.96	.954	1.59	1.81	1.82	1.62
Peanuts (pound) .....	cents 4.8	3.55	6.23	7.10	7.19	8.11
Apples (bushel) .....	dollars .96	.90	1.60	2.04	2.73	1.62
Oranges, on tree, per box .....	do 1.81	1.11	1.23	2.24	1.70	1.97
Hogs (hundredweight) .....	do 7.27	8.38	14.07	12.80	12.80	12.80
Beef cattle (hundredweight) .....	do 5.42	6.56	11.76	11.40	11.40	9.16
Veal calves (hundredweight) .....	do 6.75	7.80	13.55	12.70	12.70	11.40
Lambs (hundredweight) .....	do 5.88	7.70	13.03	12.10	12.50	9.94
Butterfat (pound) <sup>1</sup> .....	cents 26 3	20 1	49 6	51.0	50.8	48.1
Milk, wholesale (100 pound) <sup>2</sup> .....	dollars 1.00	1.81	1.309	1.3.38	1.3.85	2.86
Chickens (pound) .....	cents 11.4	14.9	22.1	24.4	23.9	19.3
Eggs (dozen) .....	do 21.5	21.7	39.0	44.9	34.0	34.5
Wool (pound) .....	do 14.3	23.8	39.5	40.5	40.2	30.9
Tobacco (pound):						
Fire-cured-types 21-24 (pound) .. do .....	13.6	---	16.4	27.7	24.6	14.8
Burley-type 31 (pound) .. do .....	22.2	19 1	41.5	45.5	45.3	30.9
Air-cured (dark) type 35-36 do .....	10.9	8 6	15.6	25.7	20.9	11.9
(pound)						
Air-cured (dark) type 37 (pound) do .....	14 6	11.4	21.0	40.0	35.3	15.9
Cigar filler type 41-44 (pound) do .....			12.8	18.0	17.4	---
Cigar binder type 51-56 do .....			16.8	33.8	28.3	---

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1910-July 1929.

<sup>5</sup> Does not include dairy feed payments since December 1943.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

<sup>8</sup> Base price crop years 1910-28.

<sup>9</sup> 5-season average, 1934-38.

<sup>10</sup> 10-season average, 1919-28.



## FRUIT

premium practices are carried on as usual. Prices of wheat in principal markets are generally at or close to ceiling levels.

January weather reports indicated that a large part of the Wheat Belt either had no snow or had only a light covering, and a general snow blanket would therefore be beneficial. The Ohio Valley had experienced alternate thaws and freezes, but relatively dry ground minimized harmful effects.

Extreme dryness, causing cracking in the ground in some areas, continued in the north central districts, particularly in Nebraska.

Precipitation in the Southwest had brought sufficient moisture for the top soil, which will insure rapid growth with the advent of warm weather. However, the subsoil moisture supply is still limited and good spring rains will be required. There was a good snow cover in the eastern Great Basin, but most of the Wheat Belt in Washington was bare. Winter grains in the South need warmth and sunshine.

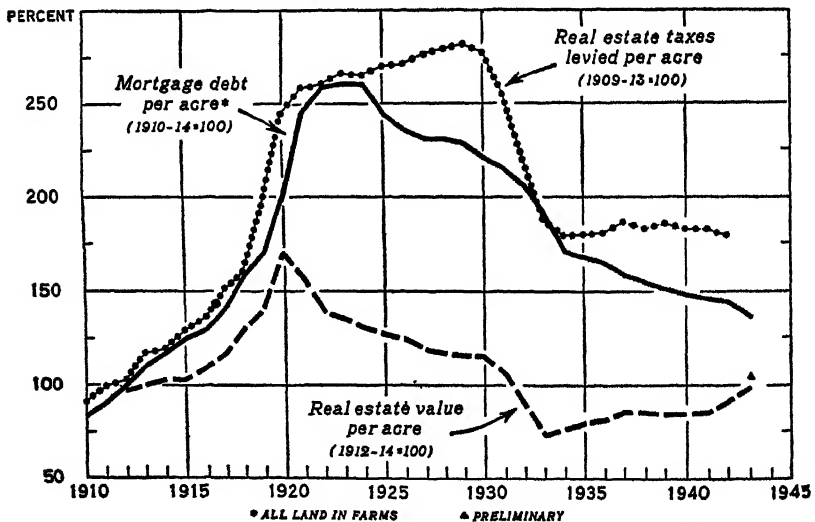
**C**ITRUS growers are now harvesting what promises to be the largest crop on record, slightly larger than the record crop last season and about two-thirds larger than the 10-year (1932-41) average.

The 1943-44 orange and tangerine crop, as of January 1, is expected to be 97 million boxes, 9 percent larger than the crop last season. The grapefruit crop this season, estimated at 49.5 million boxes, is about as large as that of last season, and the lemon crop of 15 million boxes is slightly greater.

Citrus fruits will provide the principal volume of fresh fruits reaching consumers this winter and spring. Supplies of apples and pears from cold storage holdings will be much smaller than a year ago. On January 1, 1944, these apple stocks totaled 20,648,000 bushels, 32 percent under a year earlier, while pear holdings were 713,000 bushels, 53 percent below a year ago.

## FARM MORTGAGE DEBT REAL ESTATE TAXES, AND REAL ESTATE VALUE, 1910-43

INDEX NUMBERS OF AMOUNTS PER ACRE



# The Why of the 1944 Agricultural Goals

**F**ARM production in 1944 will have to meet the greatest need yet known for the food and fiber output of American farms. A large scale invasion of Europe and continued engagements in the Pacific will both require prodigious quantities of food. American civilians, with more income than they have ever had, will desire increased amounts of food. Lend-lease and foreign relief requirements will continue to grow, particularly as more areas are liberated by the Allies during the year.

Boiled down to its essentials, this need indicates tremendous wartime requirements for the products of American agriculture—greater than 1942 or 1943.

Here, then, is one of the principal factors in establishing the goals for 1944. The second is determining, through discussions with State and local leaders, what American farms can produce with the resources available to them. A third principal factor, in a sense part of the second, is determining and then improving the adequacy of equipment, supplies, credit, labor, prices, and similar essentials of increased production.

After considering these factors the 1944 goals were established at levels that with average weather and crop yields would result in a total agricultural output ever larger than the record years 1942 and 1943.

## Goals Only the Beginning

Establishment of agricultural goals is, of course, not an end in itself. It is only the beginning of the production program. It points the direction and the distance the production program should go in order to more adequately meet the expected needs. Knowing this, it is easier to devise the means for arriving at the desired destination. Farmers want to know the products that are most needed in the war so

they can plan their production to meet that need.

Partly as a result of establishing agricultural goals and developing programs to assist in their achievement, food and fiber production in this country has shown a remarkable increase since World War II began in 1939. This has been especially true of the foods and fibers most needed, such as milk, eggs, oil crops, vegetables, and meats. Total food production in 1943 was a third more than the average for the pre-war years of 1935-39. With average or better weather the increase called for in the 1944 goals can be achieved.

## More Acres, Low-Yield Insurance

The almost phenomenal increase in production cannot, of course, all be attributed to the planning and execution of goal programs during the last two years. For one thing agriculture has been blessed with better than average weather. Incidentally, such good weather may not continue in 1944, as discussed elsewhere in this issue, and as insurance against poorer than average weather with its adverse effect on yields, larger acreages of many crops are charted for this year. For another thing accumulated inventories of machinery, feed, and fertility set the stage for the increase. Even so, the stimulation and direction provided by the goals facilitated maximum utilization of these resources so as to increase the output of the products most needed. This has resulted in a remarkable job of shifting production to meet war needs.

Like industry, agriculture is pretty largely converted to war production, but further shifts are called for in the 1944 goals.

Emphasis this year is on direct food crops, on milk and eggs, and on legume and hay crop seeds. Brief

comments on the goal for these and other important crops follow.

Further large increases over 1943 are asked for soybeans, peanuts, dry beans, and dry peas. These oil and high-protein crops are extremely efficient sources of food nutrients so badly needed for both civilian and military uses. For the same reason increases are asked for sweetpotatoes and truck crops.

### **Big Demand Ups Wheat Acreage**

Although wheat is primarily a food grain it is now being used extensively as livestock feed. This partly accounts for the substantial wheat increase. Wheat produces more feed units per acre in many areas than do the usual feed grains. Because wheat and flaxseed are produced in the same areas and because flax production cannot be continued on the same land year after year, more land will be planted to wheat and less to flax in 1944.

The feed crop goals have been carefully worked out to obtain maximum feed production from the available acreage. They call for further shifts from lower yielding to higher yielding feed crops, particularly from oats to corn in some Corn Belt areas. Thus the 1944 goal calls for more corn. Achievement of this increase as well as the soybean increase—a third more corn and soybean acreage than the 1937-41 average in the five principal Corn Belt States—will have to mean less small grains for feed in the areas where corn and soybeans are raised. Nationally the acreage goals for barley and sorghums are about the same as 1943 while the oats goal is less.

### **Available Land a Limiting Factor**

A substantial increase in all feed crops is not suggested in this year's goals for two reasons. One, the limitations on available crop land will not permit the heavy livestock feeding per animal unit of 1942 and early 1943. Two, the livestock goals suggest the

raising of fewer meat animals during 1944 than during 1943.

In the livestock goal, only milk cows show an increase over 1943.

To increase milk production, as much as called for in the goals, would require about half a million more milk cows than in 1943. Even with this increased number the milk goal of 121 billion pounds would mean about 30 pounds more milk produced per cow per year than in 1943, but 100 pounds less per cow than in 1942. With average weather the milk goal can be obtained but it will be difficult to reach unless dairy farmers are assisted with their production problems. The civilian rationing of many milk products and the growing military and export demand for all milk products place them high on the goal priority list.

### **More Layers—More Eggs**

Like milk, eggs are high in nutritive value. Accordingly the 1944 goal calls for the maintenance of a very high production. With the large number of layers now on farms and expected throughout the year, the egg goal should not be too difficult to achieve except possibly in deficit feed producing areas. With sufficient feed to meet minimum needs, assuming efficient feed utilization through rigid culling and full feeding programs, it may be possible to exceed 1943 output.

### **Hay Seed Acreage Up Sharply**

Percentagewise the hay crop seed goal shows one of the largest increases over 1943. The importance of adequate production of legume and grass seeds heretofore has not been adequately stressed. Growing emphasis on improved pastures and hay crops to increase milk production and the short supply of two important hay seeds, northern-grown alfalfa and ladino clover, gives new importance to hay seed output. If more ladino clover seed was available, for example, it could be used in the Northeast to help increase milk production as soon as stands could be established.

Those are some of the whys of the more important increases called for in the 1944 goals. The accompanying table provides the national figures, with comparisons, of all the commodities for which goals have been established. State and local goal figures are available from local farm leaders. The whys of the national goals apply,

for the most part, to these goals. To provide an adequate supply of food as further insurance for an early victory, every farmer should study the local goals which apply to his area before making final spring planting decisions.

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1944 Agricultural Goals, With Comparisons

Commodity	1937-41 average	1943 actual	1944 goal	1944 goal as percentage of—	
				1937-41	1943
Planted acres unless indicated otherwise					
Oil crops:	Thousands	Thousands	Thousands	Percent	Percent
Soybeans for beans <sup>1</sup> .....	4,121	10,820	13,454	331	126
Peanuts grown alone.....	2,361	5,202	6,158	261	118
Flaxseed.....	2,307	6,320	5,805	256	93
Fiber crops:					
Cotton.....	26,857	22,151	22,277	85	101
Flax for fiber.....		14	25		179
Broomcorn.....		272	414		152
Grain crops:					
Wheat.....	69,811	55,109	67,030	97	122
Corn.....	91,975	97,136	100,253	109	103
Oats.....	39,646	42,858	89,558	100	92
Barley.....	14,290	17,829	17,372	122	100
Sorghums (except sirup).....	17,070	17,291	16,740	98	97
Rye for grain <sup>1</sup> .....	3,700	2,777	2,408	65	87
Rice.....	1,118	1,531	1,525	136	100
Vegetable crops:					
Fresh market truck <sup>1</sup> .....	1,740	1,560	1,688	97	108
Process truck.....	1,426	2,079	2,210	155	106
Dry beans.....	1,977	2,734	3,048	154	111
Dry peas.....	280	832	895	320	108
Potatoes.....	2,913	3,430	3,519	121	103
Sweetpotatoes.....	741	895	1,056	143	118
Sugar crops:					
Sugar beets.....	914	619	951	104	154
Sugarcane <sup>1</sup> .....	264	322	333	126	103
Hay and seed crops:					
Timothy hay <sup>1</sup> .....	57,197	61,016	62,838	110	103
Hay crop seeds.....	3,037	3,486	4,890	125	140
Cover crop seeds <sup>2</sup> .....	211	418	362	172	87
Tobacco crops <sup>1</sup> .....	1,612	1,462	1,756	109	120
Livestock numbers:					
Cattle and calves on farms Dec. 31.....	69,220	<sup>3</sup> 80,800	76,842	111	95
Sheep and lambs on farms Dec. 31.....	53,244	<sup>3</sup> 52,900	51,901	97	98
Sows to farrow:					
In spring.....	7,529	12,134	10,325	137	85
In fall.....	4,798	7,601	6,808	144	91
Milk cows, average per year.....	23,275	<sup>3</sup> 25,660	26,148	112	102
Chickens raised on farms.....	656,464	<sup>3</sup> 925,652	892,983	136	96
Commercial broilers raised.....	110,927	<sup>3</sup> 248,576	208,805	188	84
Turkeys raised.....	80,723	<sup>3</sup> 33,069	32,079	104	97
Livestock products:					
Milk on farms (pounds).....	107,800,000	118,235,000	121,237,000	112	108
Eggs on farms (dozens).....	3,252,000	4,490,000	4,597,000	141	102

<sup>1</sup> Harvested acreages.

<sup>2</sup> Includes hairy vetch, common vetch, purple vetch, Austrian winter peas, crimson clover, and common rye grass.

<sup>3</sup> Preliminary.

# Prospective Crop Yields for 1944

**C**ROP YIELDS per acre are likely to be lower in 1944 than in either of the last two seasons. If weather conditions during 1944 are no better or worse for crops than the average for all past seasons for which we have records, crop yields may be expected to average about 19 percent above the 1923-32 or pre-drought average, but 4 percent below 1943 and 12 percent below 1942. Present prospects point to yields for 1944 nearly equal to those of 1940 and 1941 and substantially above those for earlier years.

Favorable factors which will tend to raise yields above 1943 include: a larger and possibly record supply of fertilizers, further shifts to high yielding varieties, prices high enough to justify better than usual care of crops, and increasing centralization of some crops in the best producing areas. Chief factors now in sight which will tend to reduce yields are: less favorable moisture conditions from Nebraska and the Dakotas westward, and the need to increase the acreages of some important crops in areas where yields are likely to be low. Each of these factors must be considered separately because each affects only certain crops in a limited group of States.

## Largest Fertilizer Supply

A large quantity of fertilizers will be available for 1944 crops and the total tonnage is expected to be at least 5 percent, and possibly 7 or 8 percent greater, than in any past year. Wider use of fertilizers will tend to raise yields in areas where fertilizers are important, especially in the coastal States from Maine to Mississippi and to a lesser extent in other areas extending westward into Michigan, Indiana, Arkansas, and Louisiana. As a group these States will have about 135 million acres in crops this year and will use about 10 million tons of commer-

cial fertilizer, equal to an average of about 150 pounds per acre on the entire crop acreage in those States. Fertilizers are also important in some of the fruit and vegetable producing areas of California, but they are seldom used in quantity on nonirrigated land where the annual rainfall is less than 30 inches.

The distribution of the total tonnage of fertilizers in recent years has been roughly a little over one-third to corn and small grains; one-fourth to potatoes, sweetpotatoes, other vegetables and fruits; one-fifth to cotton and tobacco; one-fifth to hay crops, pastures, peanuts, soybeans, and other crops. Thus the benefits of the increased supply will be shared for nearly all eastern crops. As compared with the 1923-32 period the 50 percent increase in fertilizers used probably raises the general level of crop yields about 5 percent. The great increase in the quantity of agricultural lime used is also tending to raise yields.

## Better Strains in Wider Use

The progressive substitution of new and improved varieties of crops for varieties formerly grown has been a major factor in the upward trend of yields in recent years but in many cases the benefits have been of importance only in limited areas. For example, the rapid substitution of hybrid corn for the open-pollinated varieties, universally grown a few years ago, increases the prospective 1944 production of all grain in United States by 10 percent, even though 85 percent of the acreage of hybrid corn has been in only eight States.

In the case of wheat, improvement in yields resulting from the development and use of rust-resistant varieties and from other efforts to reduce losses from rust appears to be important chiefly in States where rust has been troublesome and in years when yields

are not limited by drought. For this reason the yields of the past 3 years, averaging a bushel per acre more than in any single previous season, do not indicate what may be expected this year.

Yields of oats, flax, potatoes, cotton, sugar cane, sugar beets, alfalfa, beans, and soybeans have all shown marked local improvement following the use of improved varieties. Present prices of farm products should enable nearly all farmers to buy improved seed and thus increase yields of these crops.

### High Prices Promote Better Care

Favorable prices also stimulate the adoption of better farm practices, reduce waste of crops produced, and encourage wider use of lime, fertilizers, and spray materials. Higher prices and expenses have likewise stimulated greater use of equipment and more intensive use of the most productive land. For example, higher wages have made it progressively less profitable to hire a man with a hoe and progressively more profitable to hire a man with a tractor. Many farmers who have power equipment find it profitable to rent additional land and otherwise operate larger acreages. Some pastures on good farm land are being plowed for crops while some of the poorer fields in submarginal areas are turned into pastures. This and

similar developments tend to concentrate more of the national crop acreage on the best land and will be a favorable factor in increasing yields.

Wartime acreage shifts which affect crop yields will depend on the weather and so early forecasts cannot be precise. In general, though, the efforts of Corn Belt farmers to increase the acreages of corn and soybeans will increase the percentage of the corn crop planted on good land, and to this extent will increase the national average yield of corn per acre but decrease the average yields of the oats, hay, and other crops displaced from this good land. Prices of potatoes and vegetables have recently been unusually high in relation to freight rates. This has benefited areas far from market and has tended to cause large acreage increases of these crops in high-yielding areas which ship their products long distances by rail. On the other hand, increases in peanut production, as compared with pre-war, have been mostly in States where the yields have been below the national average. This tends to reduce the national average yield of peanuts per acre.

Favorable weather largely accounts for the exceptional yields of 1942 and partially accounted for the better-than-average yields of 1941 and 1943. Present crop prospects for 1944 are

Past and 1944 Prospective Crop Yields per Acre, United States Averages for All Harvested Acreage

	All Corn	All Wheat	Oats	Bar- ley	Tame Hay	Cot- ton	Soy- beans	Beans	Pota- toes	To- bacco	28 crops (per- cent of 1923-32 average) <sup>1</sup>
	Bu.	Bu.	Bu.	Bu.	Tons	Lb.	Bu.	Lb.	Bu.	Lb.	Pd
1880-99.....	25.9	13.4	27.5	23.7	1.25	182	-----	-----	82.5	732	-----
1900-19.....	26.6	14.3	29.9	23.2	1.31	185	-----	-----	96	818	-----
1920-29.....	26.8	14.0	29.7	22.7	1.31	162	-----	665	111	772	100.6
1930-36.....	21.4	13.1	26.1	19.9	1.19	187	14.6	729	108	806	94.2
1937-41.....	25.9	14.6	31.6	23.3	1.39	246	18.7	917	126	941	117.7
1942.....	35.2	19.8	35.6	25.5	1.63	272	18.7	987	137	1,023	136.2
1943.....	32.5	16.5	29.8	21.9	1.43	252	18.1	884	140	960	124.0
Prospective 1944 <sup>2</sup> ...	31.1	14.0	31.0	23.0	1.30	250	18.0	880	131.5	1,000	119.3

<sup>1</sup> Crops included in the average, in addition to the 10 listed in the table, are: sorghums for grain, rye, flaxseed, rice, wild hay, peanuts, sweetpotatoes, sugar beets, apples, 3 citrus fruits as a group, and 6 other fruits as a group.

<sup>2</sup> Average weather difficulties are assumed.

not as favorable as they were at this time in any of these three years. The fall and winter drought threatens 1944 prospects quite generally in the 10 Great Plains States. When weather is favorable these States harvest nearly 40 percent of the total crop acreage in the United States and fluctuations in their rainfall have been responsible for much of the variation in total crop production. In contrast to the two preceding years when crops in these States were given a good start by 20 percent more than normal rain and snow in the fall, the precipitation in the fall of 1943 was 25 percent below normal. Consequently, forecasts of wheat, oats and barley will have to be conservative until moisture conditions in these States further improve. Likewise a large part of the area west of the Rockies has been so dry during the fall and early winter that prospects there have been rapidly declining. In the East the fall has been dry but not dry enough to reduce prospects for 1944.

#### Weather Most Important Factor

Considering all these favorable and unfavorable factors, there seems some justification for expecting a better than average season for 1944 crops in most of the Eastern half of the country but in much of the Western half prospects seem rather uneven and less promising than the long-time average. Actual yields in 1944 will be determined primarily by the weather during the growing season. Present forecasts for crops not yet planted show only what yields may be expected if the weather during 1944 is neither more favorable nor less favorable than the average of all past seasons for which we have records.

Prospective yields for some of the more important crops follow.

*Corn yields*, after varying only slightly from decade to decade for many years, have recently been rising because of the increased acreage of hybrid corn. The most probable United States yield in 1944 would seem to be a little over 31 bushels per acre,

more than 5 bushels above the usual yield 10 years ago when hybrid corn was still experimental. In 1943, hybrid corn was planted on more than half the total corn acreage in the country and as it was planted most extensively in the best corn areas, it produced nearly 70 percent of the total corn crop. Further expansion of hybrid corn acreage will be less rapid but the gradual development of new hybrids suitable for different localities will no doubt help to increase corn yields for a long time.

#### Wheat Yields Below 1943

*Wheat* yields have varied chiefly with the weather. On the basis of December 1 prospects, the 1944 wheat crop was forecast at 11.2 bushels per planted acre, equivalent to about 14.3 bushels from each acre expected to be harvested. In the area extending from central Kansas into northeastern New Mexico, crop prospects were improved by the abnormally heavy December rains and snows, but from the Dakotas, Nebraska, and northwestern Kansas westward the dry fall was followed by a dry December. This gives part of the winter wheat a poor start and increases the uncertainty for spring wheat. Instead of expecting a yield of 16.6 bushels per acre for all wheat, as was forecast at this time last year, it would seem best to expect about 14 bushels per harvested acre in 1944 and allow for the more than usual acreage abandonment.

*Oats and barley* have suffered from the hot summers and droughts of the last 14 years, but, when similar seasons are compared, the yield of oats appears to have been rising, chiefly in some States where productive new varieties are being introduced. Winter barley has been spreading into new areas but as yet the acreage affected is relatively small. Probably 31 bushels of oats per acre, and 23 bushels of barley is as much as should be expected in 1944.

*Sorghum* yields will depend largely on summer rainfall in the Southwest, but new varieties are promising.

Varieties grown for grain should average 15 bushels per acre.

Potato yields per acre have been rising about a bushel per acre for the last 50 years and with large supplies of certified seed and fertilizer available, and large acreages expected in the leading commercial areas, prospects for a large yield have rarely, if ever, been better this early in the year. A yield of 131 or 132 bushels per acre would seem to represent 1944 prospects at this time although no United States average yields prior to 1940 were this high.

Fruits in the eastern half of the country appear definitely better than

at this time last year but the chances are against western grape yields as good as last year. Citrus groves appear promising and will be well fertilized and well cared for; they will probably produce as well, perhaps better, than in 1943, but freezes or hurricanes may upset forecasts as they have in the past.

Other crops show prospects about as usual and about the same as at this time last year, but expectations for all crops will change from month to month as more information becomes available

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## Farm Equipment Available in 1944

NEW FARM equipment outlook for 1944 is much improved over 1943. Over-all raw materials authorized by the War Production Board for making general planting, tillage and harvesting equipment in 1944 is more than double the quantity authorized for 1943. The 1944 quota is about 80 percent of the production in 1940, a year in which manufacture was relatively large. Furthermore, the manufacture of repair parts in 1944 will be unrestricted.

The farm machinery program, as a whole, is in good shape. The production of new farm machinery has accelerated rapidly during the winter months and, except for a few items, is not in serious *direct* competition with the manufacture of war equipment. On the vast majority of farm items, manufacturers are expected to meet their production schedules and deliver the goods on time. The War Production Board has assigned a special force of field specialists to assist farm machinery manufacturers to obtain labor, materials and components and to assist in avoiding or breaking bottlenecks as they occur.

Under war conditions it has not been possible to make farm equipment in sufficient quantities to meet the de-

mand of all that could be sold. Over-all production schedules for 1944 were made to fit a nation building equipment necessary to fight a world war. Just as gas must be conserved by doing only necessary driving, just as food supplies must be economized—so, too, materials and components required for the production of farm equipment must be conserved by concentrating on that most needed. The quantities of raw materials allocated for making farm machinery and repair parts this year are more than *twice* as large as last year because this much more equipment is expected to be needed to meet bigger-than-ever 1944 farm goals.

To farmers who are concerned about the availability of farm equipment, "farm machinery" means thousands of items—everything from milk pails to tractors. Obtaining a supply of milk pails is not difficult. An allotment of tin plate is made and the manufacturing job is relatively simple. But when it comes to the complicated mechanisms of a tractor, the sore spots are many—bearings, forgings, engine blocks, carburetors, magnetos, transmissions, and similar parts that often are made in separate plants and later assembled in the finished tractor.



These are the very components required by army tanks, navy landing craft, airplanes, trucks, and other prime war equipment. Thus the production of tractor parts in sufficient quantity to meet all essential needs presents a difficult problem.

Compared with the rationing schedules of 1943, the improved outlook in supply of equipment for 1944 permits a reduction in the number of types of machinery to be rationed. Distribution controls are now considered necessary on only 46 types, and rationing control on only 31 types of the most essential labor-saving equipment.

Machinery rationing for 1944 continues under War Food Administration orders. The new program permits manufacturers greater latitude in distribution than was possible in 1943. Neither attachments nor repair parts are subject to rationing.

Following are representative samples of increases in farm machinery under approved schedules for the 1943-44 production year. Note that both the 1942-43 and 1943-44 authorized production is given as a percentage production of the same equipment in the base year, 1940, an exceptionally good year in farm machinery production.

1943 and 1944 Farm Equipment Production as a Percentage of 1940 Output<sup>1</sup>

Equipment Groups	1943 percent of 1940	1944 percent of 1940
Tillage, planting, cultivating, fertilizing, and spraying equipment.....	30	79
Harvesting and haying equipment, and farm elevators.....	69	125
Tractors, wheel type.....	33	53
Wagons, farm trucks (not motor trucks), irrigation equipment, pumps, and windmills.....	40	92
Dairy, poultry, barn, and miscellaneous equipment.....	74	86
Total.....	46	87

<sup>1</sup> Repair parts excluded in all three years.

Meeting the wheel tractor production quota in the current year is difficult. Nevertheless, accelerated production by leading tractor makers

promises that the quota will in all probability be reached. Incidentally, the production scheduled between July 1, 1943, and June 30, 1944, approximates or exceeds the wheel tractor production of every year during the 13-year period 1927-39, inclusive, excepting only 1937. Production of crawler-type tractors for nonmilitary uses is inadequate because of military demands for this type of equipment but the supply of repair parts for these tractors is steadily improving.

Although more than twice as much new farm machinery will be available in 1944 as last year, the output is not expected to satisfy the demand, lumping all items together. The situation calls for repair and maintenance of implements on a wide scale again in 1944. Repair parts are expected to be available in ample quantity, with the possible exception of a few of the critical component type which may be somewhat light. This is why maintenance was emphasized continually in this winter's educational work.

#### Transportation Items Tight

*Transportation.*—One of the tightest spots in farm equipment will be in transportation vehicles, including trucks and replacement tires for trucks now in operation. Allied military operations require the lion's share of newly made hauling vehicles of all kinds. When fighters land on foreign shores, or invade enemy territory, they must take their transportation with them. Consequently, on the home front, it is imperative that everyone maintain trucks, tires and other hauling equipment now in use. It will be necessary to keep every farm truck operating and used to the fullest extent. Motors must be kept in condition and tires must be recapped. The synthetic rubber production program has been successful but the tire shortage is still with civilians. Here again military needs come first.

In addition to maintenance, farmers may have to pool their rolling stock. Their success in pooling farm machin-

ery and trucks in 1943 suggests a partial solution of farm-to-market hauling in 1944.

Manufacture of new trucks for farm use in 1944 does not promise to alleviate the transportation problem materially. Although truck production for civilian use in 1944 is scheduled at four times that of 1943, it is still only a small part of a normal year's production. Furthermore, the relatively low production planned this year must be divided among farmers and several other civilian claimant groups.

The seriousness of the tire situation, the extent of our current starvation list on tires, may be seen in figures from the Office of the Rubber Director. At the end of 1943 there had been distributed during that year a total of about 17,200,000 tires of passenger car size. But—because this figure included synthetic tires, war tires made of reclaimed rubber, used tires recovered by salvage collection, and other emergency tires—the total was the equivalent of only about 12,000,000 new tires. This compares with approximately 50,000,000 tires a year prior to the war.

#### Pressure Canners Not Rationed

*Pressure canners.*—The increased emphasis on victory gardens and together with wider use of home-grown foods have greatly increased demands for pressure canners and other types of home food preservation equipment. From 1929 to 1942, approximately a million pressure canners were manufactured. In 1943 the production was a little more than 300,000 pressure canners. The manufacture of 400,000 during 1944 has been authorized. The inventory on hand at the end of 1943, plus the proposed 1944 output, has made the supply and demand situation so favorable that pressure canners for food preservation were removed from rationing.

*Electric motors.*—The scheduled monthly production for all manufacturers of fractional horsepower electric motors adapted to farm use is 150,000

units, of which about 30,000 per month are being supplied to manufacturers of farm machinery for use as component parts of farm equipment. In addition, 18,000 units per month are scheduled for distribution as replacement motors to be sold to farmers who meet the requirements of Priorities Regulation 19. Due to large requirements of the Army, Navy, and Maritime Commission for fractional horsepower motors, manufacturers are behind production schedules. Some increase in the supply is expected in the second quarter of 1944, but motors will be difficult to obtain as long as the war continues. Motors of from 1 to 10 horsepower can be purchased by farmers having priority ratings of AA-5 or higher. Used motors of from 1 to 10 horsepower are available and can be purchased without priority ratings.

#### Engine Priorities Simplified

*Small farm engines.*—To expedite the issuance of priority ratings to farmers for engines of 20 horsepower and less, a procedure has been established whereby AA-2 ratings may be extended to farmers following the approval of applications filed with County Agricultural Conservation Committee offices. This simplified procedure is based upon an expected supply of approximately 37,000 internal combustion engines, both air-cooled and liquid-cooled types, for farm use. The priority rating is issued if the use is essential to the on-farm production of crops, livestock, livestock products, poultry, eggs, honey, or is specified among a liberal list of other essential uses. The available supply of engines does not permit the granting of priority ratings for such uses as the operation of lawn mowers or household machines or to supply the needs of summer homes.

*Large farm engines.*—Because of the greater demand for engines of more than 20 horsepower, farmers needing larger size engines should file applications with the nearest field offices of the War Production Board. The

recommendations of County Agricultural Conservation Committees is desired on farm applications and will expedite consideration by WPB field offices.

*Hand tools.*—Farm and garden hand tools are expected to be available in sufficient quantities during 1944 to supply essential needs of farmers as well as victory gardeners. The present production of these tools is ex-

pected to be greater than for any previous year. Although the production of mechanics' hand tools is greater than during any previous period, the demands of the armed forces consume most of it. During 1944 some increase in the supply available to farmers is expected.

DAVID MEKKER

*Office of Materials and Facilities*

## Farm Labor Supply For 1944

WITH this year's food needs greater than in any previous year, it is essential that American farmers produce more than in the last two bumper years. One of the most important factors for increased output is an adequate labor supply. Assuming favorable weather in order to carry on planting and harvesting operations, it is now estimated that nearly 72 million more man-days of labor will be required in 1944 than in 1943, if this year's production goals are to be achieved. This additional work-load will require the equivalent of 287,600 additional men, each working 250 10-hour days per year.

The bulk of the nation's farm production must come from the million or so of the most highly productive farms. The operators of these farms cannot be expected to further increase their working hours or increase those of their hired help and families in 1944. Last summer these operators about reached the maximum of human endurance in number of hours worked on their farms. In some States operators worked an average of 13 hours a day while their hired hands worked from 10 to 12 hours a day.

On the other hand, production on many low-income farms, having under-employed family labor, can undoubtedly be increased to some extent by helping such families obtain more adequate facilities and land, and by helping them plan their work so as to

utilize their labor and equipment more efficiently.

To help farmers meet their 1944 farm labor needs present plans call for (1) continued deferments of draft-age farm workers engaged in essential production, (2) a more complete mobilization of all potential local State farm labor resources, (3) wider use of war prisoners, and (4) where these sources are not sufficient, for a mobile task force of foreign and interstate farm workers who can be used in adequate numbers at the right time.

The Tydings amendment to the Selective Service Act provides for the deferment of workers necessary to and regularly engaged in agricultural occupations or similar endeavors essential to the war effort as long as such workers remain so engaged or until they can be satisfactorily replaced. Nearly all the States have raised the level of requirements for such deferments, and local draft boards, with the advice of county agents and agricultural war board members, are constantly reviewing these deferments. If the production goals for 1944 and subsequent years are to be achieved, it is essential to continue the deferment of workers employed full time on productive farms.

There is some hope of increasing the farm labor force with skilled workers during the coming year. It is quite likely that the production of some war goods will be reduced materially during

the coming year. Already some munition plants are being shut down. In such cases, efforts will be directed toward encouraging the systematic return of experienced farm workers to agriculture as they are laid off or become underemployed.

In general the War Food Administration's recruitment and placement program for 1944 will follow the 1943 pattern but on a more systematic and intensive scale. Major emphasis will be placed on full mobilization for seasonal farm work, such as in planting and harvesting operations. Local leaders will be urged to continue to work with county agents in arranging for the pooling of labor and machinery. Businessmen, nonfarm women, and youths will again be recruited and employed part-time and full-time on labor deficit farms.

Over 35,000 workers will be transported from areas of temporary surplus to areas of critical need *within* each of the various States. It is planned also to expand somewhat the 1943 program dealing with *interstate* and *foreign* workers. These plans call for the maintenance of a mobile task force of 126,000 able-bodied, experienced, interstate and foreign workers. Such workers will be shifted from area to area of critical need, as required, to assist local labor forces in the planting, cultivating, and harvesting of essential food and fiber crops. Being emergency farm workers, they will not remain permanently in any one community.

### **No Labor Source Overlooked**

No source of labor for agriculture will be overlooked. Plans are now mapped out for farmers to again use, where feasible, Japanese evacuees, war prisoners, conscientious objectors, inmates of penal and corrective institutions, and furloughed members of the armed forces in cases of extreme emergency.

Food industry labor problems are of concern to agriculture because many farm products must be processed before

being made available for ultimate consumption. Increased farm production would be futile if foodstuffs were allowed to go unprocessed because of inadequate manpower in the food industries. The 1944 labor requirements of the food industries are expected to be the highest on record. But unfortunately the labor supply available to these industries has not increased proportionately to the greatly increased demands for processed foods. On the contrary, employment has actually declined in some important food plants. Thus it may be necessary for agriculture to share some of its labor supply with certain of the food industries during slack periods in agriculture.

At the other side of the food picture are industries equally important to agriculture which have critical labor shortages. These industries produce mixed feeds, fertilizers, seeds, food containers, agricultural machinery, and trucks, as well as the many agricultural produce warehouses. The importance of these industries to operate at full capacity is quite apparent if 1944 production goals are to be achieved. And so agriculture may be called upon to share its labor with these industries during slack periods in agriculture.

### **Farm Labor Needs Misunderstood**

The true nature of farm labor needs and supply is sometimes misunderstood by people unfamiliar with agricultural problems. They tend to overlook variations in labor productivity from region to region and from farm to farm. These people are prone to assume a high degree of mobility of agricultural workers which does not exist, and some even feel that the achievement of last year's production goals indicates that agriculture has no labor problems. Regardless of what the potential farm labor supply may be in areas and on farms of low productivity, it can be stated unequivocally that the margin of labor supply on most of the nation's *commercial* farms is very narrow. It is so narrow that unfavorable weather conditions, or other emergen-

cies, may at any time create seasonal needs which can not be met locally. And furthermore, it is frequently impossible to find adequate numbers of either experienced or inexperienced year-around workers for such farm work.

The year 1944 is believed to be the critical year of the war. It is the year in which the United Nations expect to bring their full military and economic weight against the enemy. To do so it

is essential that they have all the agricultural commodities that can be produced. Therefore the chance of meeting the 1944 agricultural goals depends, in large measure, upon the vigorous prosecution of a realistic farm labor program which demands the service of able bodied men to perform difficult tasks.

COL. PHILIP G. BRUTON

*Director, Office of Labor*

## 22 Million Victory Gardens

THE 1944 victory garden program calls for 10 percent more gardens. This will mean 22 million gardens. And from these gardens the program calls for the production of 25 percent more food.

Last year, estimates reveal, there were 20 million victory gardens which produced 8 million tons of food. Thus the 1944 garden goal calls for 10 million tons of food produced from the 22 million gardens.

Victory gardens are one of the most popular of the Government's wartime programs. For one thing it is easy to see the relationship between a garden and total food production. Gardeners rightly feel they are making an important contribution to the war effort. But there are other reasons why gardening was so popular last year.

### Rationing Stimulated Gardening

The beginning of rationing of canned and frozen fruits and vegetables last March came at just the right time to stimulate interest in producing those foods at home. The opportunity to supplement the family's ration points appealed to the enlightened self-interest of many. Increased prices of fresh fruits and vegetables in the market also played a part. And, further, the opportunity for recreation in the home garden appealed to many people who were restricted in their customary week-end trips, golf foursomes and similar forms of diversion.

Last year's contribution of victory gardens to the nation's supply of fresh vegetables was really remarkable. Unofficial estimates by Government economists place the total commercial production of vegetables for fresh market at 10.8 million tons in 1943 and the production from victory gardens at about 7.9 million tons. It appears, then, that victory gardens on farms and in cities and towns produced about 40 percent of all the vegetables grown for fresh consumption in 1943.

### Small-Area Crops Urged

The 1943 garden program emphasized the importance of selecting crops that would give the greatest return in nutrients as well as in volume of produce for the space used. Persons with gardens in cities or towns were urged to plant tomatoes, carrots, beans, and green, leafy vegetables. Crops like corn and potatoes were not recommended for the very small gardens because they do not yield enough to justify the space required. Peas, a favorite of many old-time gardens, were not recommended for the country as a whole because a relatively cool growing season is necessary.

In making recommendations of this kind the Department of Agriculture realized that experienced gardeners went ahead and planted those crops that did best in their own localities. This type of advice was intended primarily for beginners—and there is

ample evidence that it was well received.

In general, the same choice of crops is recommended for the 1944 program. Because of increased interest in edible soybeans together with increased seed supplies of these varieties, however, more attention will be given to soybean production in victory gardens this year.

One important change in the 1944 program will be more emphasis on neighborhood and community gardens. Last year many city people began their gardening careers with a tiny plot in the backyard. A large proportion of them are now convinced they can do a better job in a community plot where more space is available and the land is better suited to gardening. But the backyard plots will not be wasted in some instances for they will be used as the "kitchen garden" for growing lettuce, radishes, green onions and similar vegetables while the community plot will be used for the larger, slower growing crops.

#### More Intensive Gardens This Year

This year there will be greater emphasis on more intensive use of garden space by succession planting and planting later into the fall. Radishes and similar rather quick-maturing crops can be followed by other vegetables in the late spring or early summer. Likewise spinach, lettuce, and such hardy crops which do best in cool weather can follow other vegetables in the early fall and thus the garden space can be more fully utilized. These are two chief ways of making more intensive use of garden space from early spring to late fall. Such methods add up to planning—to make the victory garden produce the most. Last year's initial experience by many suggests the wisdom of adequate advance planning to avoid the mistakes of the first season's efforts. A few nights spent with a paper and pencil in charting the best use of the garden space will frequently prove quite profitable and should

minimize inefficient additions of "just one more vegetable" as afterthoughts.

Equipment and supplies needed by victory gardeners in 1944 will be more available than a year ago. Contrary to some rumors there does not appear to be any danger of a seed shortage. The special victory garden fertilizer will contain more plant food this year and will be available in larger volume. More garden tools will be available while the supply of insecticides promises to be at least as good as last year. Gardeners are encouraged to get along with a few simple tools: spade or fork, hoe, rake, duster or sprayer or both. Manufacturers are authorized to make a much larger number of small dusters and sprayers this year. Very few wheel cultivators will be available but, they are not essential in most small gardens.

#### Gardens Tailored to Needs

Extension workers, victory garden committees, local garden leaders and others who are helping in the program will all emphasize the importance of tailoring the garden to fit the family's needs and facilities for taking care of it. While farm gardens can usually supply nearly all the family's vegetable needs, city and town gardens will do well to supply a share of the family's needs. We need all the food we can grow, but it is a costly waste to plant more than can be taken care of properly. As a rough guide, a garden 50 by 30 feet requires about an hour a day during spring and early summer. From then on throughout the season much less time is required.

More local garden leaders are needed this year to help beginners avoid costly mistakes. Newspaper and magazine articles, radio programs, and special publications are all essential—and they will all be readily available as the season develops—but they are poor substitutes for personal guidance in solving specific problems of beginners, often the difference between success and failure. Garden committees are now enlisting the aid of ex-

perienced gardeners to serve as local leaders for this purpose.

Because most gardeners in 1944 will have had at least 1 year's experience and because of the emphasis on more efficient gardens, it is reasonable to expect greater output per garden. The

1944 victory garden goal of 25 percent more produce from only 10 percent more garden acreage is largely based on the assumption of better gardens.

ERNEST G. MOORM, *Manager*  
*Victory Garden Program*

## Electric Pig Brooders Increase Yields

WE DO NOT know for sure who did the things, in the way of discovery and invention, that mean the most to us. We guess about it. Roger Bacon is thought, but not known, to have stumbled upon spectacles—without which many, if not most, other inventions would have been impossible. The lantern globe, from which practically all lighting devices to this day have been evolved, is believed to have been contrived by King Alfred as a means of shielding his precious time-telling candles from draughts. We like to think he did it.

We should like—those of us who have become impressed by its tremendous importance in the science and art of meat-making—to be able to think of a man by name when we think of the origin of the electric pig brooder. But we never can. He is believed to have been a Minnesota farmer. But that is as much as we can even guess.

It is not much of anything to have done, anyhow, though quite something to be proud of. If this farmer ever thought about it after it became famous, he probably thought as Strickland Gillilan once said of writing *Off Agi'n Finnigan*, "Anybody above the grade of idiot could have done it, but I did."

### Electric Brooder Quite Simple

The electric pig brooder is an almost silly simple thing. The wonder is that everybody had not thought of it before—or, at least, ever since there were electric lights. A few pieces of scrap lumber, an electric light bulb and

some sort of reflector put together in a corner of the hog house or farrowing pen—that is all there is to the electric pig brooder.

The Rural Electrification Administration, which has preached pig brooders throughout the land, has published a little folder—available to anybody who cares to ask for it—with directions by means of which anybody can knock a brooder together in a few minutes. It just provides a heated area in a corner of the pen where the little pigs may lie in comfort and out of danger of trampling and overlaying by their mother. That is all. But it is astounding how much that can mean in increased pork production—in saving of feed, both by saving the pigs that otherwise would die and by reason of the smaller number of brood sows necessary to be kept to raise a given number of pigs.

### 10 Percent More Pigs Saved

Until quite recently, it has not been possible to measure these benefits in any very definite way. True, both the Rural Electrification Administration and the Bureau of Animal Industry did some testing some time ago and announced results—in different terms. REA said that, on the average, use of the brooder in fall and spring farrowing would result in saving one pig per litter. BAI figured another way, but came to substantially the same conclusion. The two appeared to agree that, by use of the brooder, the saved pig crop could be increased somewhere in the neighborhood of 10 percent.

Individual farmers from all parts of the country told tales which made these figures look skimpy. But, of course, the farmers' figures were not scientifically arrived at while those of the Department's agencies were.

Now, other scientifically arrived at figures are available, from more extensive tests, and they tend to confirm the statements of the unscientific farmer rather than those of the scientific bureaus. The Purdue Agricultural Experiment Station, in Indiana, says that use of the brooder results in saving, on the average, 1.5 pigs per litter—half a pig better than REA ever claimed. In percentage, it figures out at 17.4—a much higher figure than previously thought safe.

### Higher Yields in Recent Test

Of course, Purdue's figures do not necessarily discredit any others. They may or may not be applicable to the country as a whole. They were made under Indiana conditions. In Indiana, according to Purdue's statement, one out of three pigs farrowed is normally lost before weaning. Losses are probably not normally so great in states farther south—they may be greater in those farther north. It might be assumed that Indiana strikes a fair average for the greater part of the country. But, whether this is true or not, the Purdue experiments tell a better story for the electric pig brooder than has ever been told by its most enthusiastic advocates, such as REA.

The Purdue results were obtained in comparative tests with 105 sows which farrowed an average of 8.5 pigs per litter. In both lots, 58 percent of the death loss occurred in the first 24 hours after farrowing and 93 percent in the first three days. Use of the brooders reduced death losses from chilling more than death losses from other causes. The death of pigs from chilling was 10 percent in the lot without brooders and 2.2 percent in the lot with brooders.

Death losses in the houses without brooders were progressively greater

as the outdoor temperature at farrowing time decreased. Change in outdoor temperature had no discoverable effect on death losses in the houses where brooders were used.

The question is raised as to whether or not the use of brooders had any effect on the rate of gain of the pigs. Those in the brooded lot gained slightly more during the brooding period and slightly less from then to weaning time. This latter result, however, is probably accounted for by the fact that the sows in the brooded lot suckled 40 percent more pigs than those in the other lot.

Summing up the results of the tests, a member of the Purdue Experiment Station staff wrote, "Such a reduction in loss will provide considerable relief to the hog producer laboring under the present shortage of farm help \* \* \* the breeding herd can be reduced without reduction in the number of market hogs produced. The saving in labor, feed and equipment is apparent."

Would it not be a gratifying task to convey that message to the old Arrowhead farmer in Minnesota who first got and applied the pig brooder idea? But it cannot be done. Nobody knows who he is or was.

### Chick Brooder Reduces Loss

A very similar story could be told of saving labor, feed and equipment by use of the electric chick brooder—which, also, REA has preached "from Land's End to John O'Groat's." But there is not space for it here.

The chick brooder is not quite so easily made as the pig brooder, but still well within the capabilities of the average farmer with saw and hammer. It, too, requires hardly more than bits of lumber and some light bulbs. REA has a chick brooder folder, similar to the one on a pig brooder, with complete directions for building and operation.

DIXON MERRITT

*Rural Electrification Administration*



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935— 39=100) <sup>1</sup>	Income of in- dustrial workers (1935— 39=100) <sup>2</sup>	Cost of living (1935— 39=100) <sup>3</sup>	1910—14=100					Prices paid, interest and taxes	Farm wage rates
				Whole- sale prices of all com- modi- ties <sup>4</sup>	Prices paid by farmers for commodities used in—					
					Living	Pro- duction	Living and pro- duction			
1933.....	69	61	92	96	108	108	108	120	85	
1934.....	75	76	96	109	122	123	122	129	95	
1935.....	87	88	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	108	126	128	136	131	134	126	
1938.....	89	91	101	115	122	123	123	127	125	
1939.....	109	105	99	113	120	122	121	125	123	
1940.....	125	119	100	115	121	131	131	133	126	
1941.....	162	169	105	127	131	140	152	151	154	
1942.....	199	238	116	144	154	149	163	164	201	
1943.....					170	163	167	164	264	
1943—January.....	227	281	121	149	163	155	160	167	224	
February.....	232	287	121	150	165	157	162	169		
March.....	235	295	123	151	167	158	163	160		
April.....	237	300	124	151	168	161	165	162	239	
May.....	238	302	125	152	170	162	167	163		
June.....	238	304	125	152	171	163	168	164		
July.....	240	306	124	151	172	164	169	165	274	
August.....	242	312	123	151	172	164	169	165		
September.....	244	316	124	151	171	167	169	165		
October.....	247	319	124	150	172	167	170	166	280	
November.....	247		124	150	173	168	171	167		
December.....					175	170	173	169		
1944—January.....					176	172	174	169	275	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	All groups	
1933.....	62	64	74	105	60	82	75	70	58
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	92
1942.....	119	155	125	199	189	152	151	157	104
1943.....	152	167	198	280	207	182	189	188	115
1943—January.....	134	164	139	277	205	177	185	182	110
February.....	138	163	156	301	214	179	170	178	112
March.....	143	166	172	302	213	180	171	182	114
April.....	146	167	189	291	213	180	173	185	114
May.....	148	167	212	253	214	179	175	187	115
June.....	151	165	234	308	211	178	179	190	116
July.....	154	163	230	315	206	178	183	188	114
August.....	155	167	204	308	206	181	193	193	117
September.....	158	171	204	311	207	185	201	193	117
October.....	162	171	197	264	203	187	212	192	116
November.....	163	165	207	295	192	190	217	192	115
December.....	170	168	231	245	192	191	210	197	117
1944—January.....									

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation. Revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation. Revised March 1943.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

<sup>5</sup> Revised.

<sup>6</sup> Revised series to begin in next issue.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

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*A Brief Summary of Economic Conditions*

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CASH FARM INCOME is far higher in this war period than during World War I. In 1943 it totaled 19.1 billion dollars, 31 percent more than the previous record in 1919, yet prices received by farmers averaged considerably lower in 1943, 19 percent for crops and 3 percent for livestock. The 1943 cash farm income was 24 percent above 1942. \* \* \* This year's record livestock numbers probably mark the high point of the ascending trend of the past six years. Scarce feed is the chief factor in foreshortening this upward trend. \* \* \* The 1943 farm wage rate index represented another record—264 percent of the 1910-14 average, 9 percent higher than in 1920. \* \* \* Reduced baby chick purchases are probable this year, although later developments in egg-feed-price relationships may brighten the picture somewhat. \* \* \* Cotton consumption during the 1943-44 season will be about 10 million bales or 10 percent less than in the 1942-43 season. Cotton prices in central markets during February were the highest since last July. Total fats and oils production in 1944 may reach 11.2 billion pounds, 300 million more than in 1943. Stocks are larger than a year ago, and increased imports are anticipated.

# Commodity Reviews

## FARM INCOME

**L**AST YEAR saw the biggest cash farm income on record—19.1 billion dollars. This amount, surpassing the previous record in 1919 by 31 percent, is comprised of 7.9 billion dollars from crops, 3 percent more than in 1919, and 11.2 billion dollars from livestock, 62 percent above the 1919 figure. The 1943 cash income was 24 percent higher than 1942.

Production in this war period has greatly exceeded that during World War I; in 1943 crop production was 23 percent above 1919, while livestock production had increased by 53 percent. Prices for crops, however, averaged 19 percent lower in 1943, and livestock prices were 3 percent lower.

Income from all crops was higher in 1943 than in 1942, with relatively largest gains being made by fruits, vegetables and oil-bearing crops. Larger returns were derived for all types of livestock in 1943 than in 1942, with poultry and eggs showing the largest relative increases.

Increased prices accounted for larger income in some cases; larger sales were responsible in others. For example, although production of oil-bearing crops was only 3 percent greater in 1943 than a year earlier, a much larger quantity was sold because the 1942 crop, of which much was sold in 1943, exceeded by 76 percent the 1941 production, a large proportion of which was sold in 1942.

Differences in weather, growing conditions, and economic factors created variations in farm income changes throughout the country. Individual States showed increases ranging from 48 percent in Florida and 42 percent in Arizona to 8 percent in Oklahoma.

Kansas and Oklahoma were the only States with smaller incomes from crops in 1943 than in 1942. The 20

percent decreases in Oklahoma was due primarily to spring floods, and fall and winter drought.

Crop income rose more than 50 percent in Arizona, Florida, Connecticut, and Maine, and over 40 percent in North Dakota. Increases of 30 to 40 percent occurred in Iowa, New Jersey, Colorado, California, Montana, Nebraska, South Dakota, Massachusetts, Minnesota, and Oregon.

Throughout the country income from livestock marketings amounted to 24 percent more in 1943 than in 1942. Bigger than average increases took place in two groups of States—one being Delaware, Maryland, and West Virginia in the north, and North Carolina, Georgia, Florida, Kentucky, Tennessee, Mississippi, and Alabama in the south; the other of Nebraska (the largest increase—more than 40 percent), the Dakotas, Kansas, Oklahoma, Texas, Colorado, New Mexico, and Nevada.

Chief factors in Southeastern increases were larger sales of hogs, chickens, broilers, and milk. In the Great Plains area, larger sales of hogs and cattle were principally accountable for the increase.

For the fourth consecutive year Iowa was the number 1 State in cash farm income, edging out California by a slim margin. Illinois won over Texas for third place. Other principal changes were in Arkansas, which fell from 20th to 24th place, and South Dakota and Florida, which rose from 23rd and 28th, respectively, to 20th and 25th.

## FATS AND OILS

**A**NNOUNCEMENT of support prices for 1944 oil crops was made by the War Food Administration on January 26, subject to Congressional authorization of the total price support program. Proposed supports would

be: Soybeans—\$1.04 per bushel at local delivery points for green and yellow varieties grading No. 1 or 2; flaxseed—\$2.95 per bushel for No. 1 seed at Minneapolis; peanuts—\$140 per ton Runner type, and \$150 per ton for other types with specified percentages of sound kernels.

Total production of fats and oils from domestic sources this calendar year is now estimated at 11.2 billion pounds, as compared with 10.9 billion pounds in 1943. This increase is due to larger stocks at the beginning of 1944 and anticipated increases in imports during the year. Stocks were still considerably below normal pre-war working levels in relation to requirements, however, and the situation may be strained in the July–September period, the seasonal low point in inventories.

Amounts available for civilian consumption this year are not likely to be higher because military and lend-lease requirements will increase, and European needs may bring further demands on U. S. supplies.

Recent improvement in the fats and oils situation has come both from increased imports and larger domestic production. But this production has been confined mostly to linseed oil and technical oils unsuitable for food, so that the relative scarcity in edible fats and oils is likely to continue for some time except for a temporary spring abundance of lard.

Record lard production of almost a billion pounds occurred during the October–December 1943 period. However, civilian and industrial consumption were large, and exports also increased, causing cold-storage stocks of lard and rendered pork fat to decline 34 million pounds during the last quarter of 1943.

Prices of fats and oils will probably continue at or near ceiling levels this year, due to strong civilian, military, and export demands. Except for butter, edible olive oil, and linseed oil, only slight changes occurred in wholesale prices of fats and oils

during 1943. Butter prices declined 5 cents per pound in June, as a result of a reduction in ceiling prices. In the first few months of 1943, prices of California olive oil rose about 8 cents per pound to the ceiling level, and prices of linseed oil increased about 2 cents per pound. Maximum prices were first established for linseed oil in May.

A drastic decline in tung nut production during 1943, due to severe freezes last spring, was disclosed in estimates for five commercial States—Georgia, Florida, Alabama, Mississippi, and Louisiana—published for the first time in early January by BAE. The 1943 crop is estimated at 9,300 tons, as compared with the preceding crop of 16,350 tons. Production of tung oil this year will probably total 2.8 million pounds as compared with 5.2 million pounds in 1943. The total value of the 1943 drop in five States for which production is reported is estimated at \$897,000 compared with \$1,501,000 for the 1942 crop. The 1939 crop was valued at \$49,000.

The improved glycerine supply situation brought about liberalization of regulations covering glycerine recovery by soap makers and fat splitters, announced on January 1, 1944, by amendment 1 to Food Distribution Order 33. Without glycerine recovery restrictions, a maximum of 150,000 pounds of fats and oils per quarter may now be used, as compared with a maximum of 10,000 pounds per month heretofore. The maximum percentage of glycerine that may remain in finished soap was raised by the amendment from 0.8 percent to 1 percent.

## LIVESTOCK

THE NUMBER of livestock on farms January 1, 1944, reached an all-time high despite a record slaughter of meat animals in 1943. The increase in numbers was a continuation of the upward trend since 1938.

Decreases in horses, mules, and sheep were offset by decided increases in hogs and cattle. In terms of animal units that allow for differences in size and feed requirement of the five species, excluding poultry, the January 1, 1944, numbers were 3 percent larger than a year earlier and 15 percent above the 10-year (1933-42) average. In terms of grain consuming animal units the increase over a year ago was about 7 percent, and in terms of hay and pasture units the increase was about 1½ percent.

Increased numbers did not, however, prevent a decrease in the total value of livestock on farms of 8.8 billion dollars, or 1½ percent under the record attained on January 1, 1943. Values per head of all species except mules, turkeys, and chickens were lower than a year earlier. While dairy cows were higher, all cattle were lower.

It is likely that this year's total of livestock numbers is the peak of the upward trend, and that it may turn out to be an all-time record. It appears to mark the culmination of a 6-year period of accumulation of abundant feed supplies coupled with Government encouragement to increase livestock production. By 1943 livestock numbers finally overtook feed supplies, and a great part of the grain stocks was consumed. Thus on January 1, 1943, feed grain supplies per animal unit of livestock (including chickens) were the highest in 20 years, but by January 1, 1944 the supply per unit had declined 20 percent, the smallest in 7 years and 18 percent below the 5-year (1938-42) average. Hay supplies (1943 production plus carryover) per hay-consuming animal unit this year were also lower than the near-record supply.

### Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State)

	5-year average		February 1943	January 1944	February 1944	Parity price, February 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.195	1.46	1.46	1.50
Corn (bushel).....do.....	.642	.601	.904	1.13	1.13	1.09
Oats (bushel).....do.....	.369	.340	.555	.775	.786	.678
Rice (bushel).....do.....	.813	.742	1.1785	1.88	1.92	1.34
Cotton (pound).....cents..	12.4	10.29	19.68	20.15	19.93	21.08
Potatoes (bushel) ... ..dollars..	1.097	.717	1.228	1.47	1.39	1.22
Hay (ton).....do.....	11.87	8.87	11.91	15.70	15.90	20.20
Soybeans (bushel).....do.....	2.96	.954	1.60	1.82	1.85	1.63
Peanuts (pound).....cents..	4.8	8.55	6.45	7.19	7.38	8.10
Apples (bushel).....dollars..	.96	.90	1.71	2.73	2.91	1.63
Oranges, on tree, per box.....do.....	*1.81	1.11	1.63	1.70	1.51	*1.97
Hogs (hundredweight).....do.....	7.27	8.38	14.63	12.80	12.90	12.40
Beef cattle (hundredweight).....do.....	5.42	6.56	12.32	11.40	11.80	9.21
Veal calves (hundredweight).....do.....	6.75	7.80	14.11	12.70	13.10	11.50
Lamb (hundredweight).....do.....	5.88	7.79	13.76	12.50	13.20	10.00
Butterfat (pound).....cents..	26.3	29.1	50.0	50.8	50.0	*45.8
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.08	*3.37	*3.33	*2.79
Chickens (pound).....cents..	11.4	14.9	22.8	23.9	25.7	19.4
Eggs (dozen).....do.....	21.5	21.7	34.2	34.6	31.9	*31.8
Wool (pound).....do.....	18.3	23.8	40.8	40.2	39.5	31.1
Tobacco:						
Fire-cured types 21-24 (pound) .. do.....	*13.6	-----	17.0	24.6	22.9	14.8
Burley-type 31 (pound).....do.....	*22.2	19.1	34.0	45.3	43.3	31.1
Air-cured (dark) type 35-36 (pound) do.....	10 10.9	8.6	13.7	26.9	24.4	11.9
Air-cured (dark) type 37 (pound) do.....	10 14.6	11.4	-----	35.3	30.6	15.9

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy feed payments since January 1944.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

<sup>8</sup> Base price crop years 1919-28

<sup>9</sup> 5-season average, 1934-38.

<sup>10</sup> 10-season average, 1919-28

The number of hogs on farms January 1, 1944, increased to 83,756,000 head. Indications are, however, that there will be a definite decrease in the 1944 spring pig crop and that total hog slaughter this year will consequently be little higher than last year, but the total for the first 9 months of 1944 will be considerably larger than a year earlier.

The continuing upward swing of the cattle cycle brought total cattle number (all classes and ages) to a new record of 82,192,000 head. Beef cattle represented the largest increases, while milk cows were up 2 percent.

Sheep numbers decreased about 7 percent below last year, resulting in a total of 51,718,000 head on January 1, the smallest since 1940. Stock sheep decreased about 3 million head and lambs and sheep on feed about 1 million head.

Numbers of horses and mules were both down about 4 percent on the first of the year. A further decrease in both horse and mule colts in 1943 indicates a continued decline in work stock numbers for some years to come.

Chicken and turkey numbers on farms increased, bringing chicken numbers to a new record high and turkeys to the third highest.

Increases in cattle, hogs, and chickens were general all over the country

## DAIRY PRODUCTS

**C**IVILIAN supplies of dairy products in 1944 will be allocated in quantities about equal to those consumed during the last half of 1943. This allotment is based on an estimated production in 1944 of 116 billion pounds as compared with 118 billion pounds in 1943. Allocations for military and lend-lease use may be somewhat larger than last year.

An order has been issued limiting the production of cheese other than American Cheddar to 1942 levels, or about 10 percent less than in 1943, still the second largest on record.

## Index Numbers of Prices Received and Paid by Farmers

(1910-14=100)

Year and month	Prices received <sup>1</sup>	Prices paid, interest and taxes	Parity ratio <sup>2</sup>
1943			
January.....	181	157	115
February.....	184	159	116
March.....	192	160	120
April.....	197	162	122
May.....	194	163	119
June.....	195	164	119
July.....	193	165	117
August.....	192	165	116
September.....	193	165	117
October.....	194	166	117
November.....	194	167	116
December.....	196	169	116
1944			
January.....	196	169	116
February.....	195	170	115

<sup>1</sup> Series revised January 1944.

<sup>2</sup> Ratio of prices received to prices paid, interest, and taxes.

The limitation will probably result in the use of some milk for Cheddar cheese production, rather than Swiss, cream, or Italian varieties.

The dairy production payments program, initiated last October to help dairymen meet increased feed and other costs, will be continued through the year if the Commodity Credit Corporation receives authority from Congress to make such payments. Rates for March and April would be adjusted to take into account increases in such costs since the original rates were established in October. During the spring and summer months after April, rates would be somewhat lower. Next fall and winter, the rates would be seasonally higher.

Production of dairy farm equipment is likely to be larger this year than last. New equipment will be available to bring additional farms into commercial milk production, to enable more producers to shift from marketing cream to marketing whole milk, to permit greater production efficiency, and for necessary replacements.

Sharp increases in milk production on farms occurred during January.

The total estimate was 8.6 billion pounds, 4 percent higher than December, and 2 percent lower than in January 1943. Unseasonably warm weather over much of the Nation during January tended to speed the seasonal increase of milk production per cow.

Milk production per cow on February 1 was estimated at 13.14 pounds, compared with 12.15 pounds on January 1, and 13.31 pounds on February 1, 1943. January increases were considerably higher than a year earlier in all regions except the West. However, on February 1 production per cow was less than a year ago in all regions except the South Atlantic. The greatest decrease from last year occurred in the North Atlantic States, where production per cow was down 4 percent. Production per cow on February 1 this year was above the 10-year average (1933-42) in all regions, ranging from 1 percent higher in the North Atlantic States to more than 10 percent higher in the West North Central and South Atlantic regions.

There was a mild upturn in the percentage of cows milked during January in contrast to a normal slight decline for the month. In all regions the percentage of cows being milked on February 1 was the lowest for that date since 1938, and in the country as a whole was the lowest in a decade.

## POULTRY AND EGGS

**B**ABY CHICK purchases, according to February intentions, will be about 17 percent below 1943, despite some difference expected between actual purchases and farmers' purchase intentions. The difference will depend primarily on the egg-feed-price relationship during the hatching season. Poultry feed prices are now about 20 percent higher than a year ago.

Intentions this year are to buy 75.7 percent straight run chicks (77.4 were bought in 1943), 20.1 percent pullets (17.2 percent in 1943), and 4.2 percent

cockerels (5.4 percent in 1943). It is anticipated that baby chick purchases in the more commercialized areas of the New England and Pacific Coast States will be 39 and 37 percent sexed pullets, respectively.

Hens and pullets on farms laid 4,436,000 eggs in January, the largest production on record for the month—17 percent more than a year ago and 82 percent more than the 10-year average (1933-42). Increases occurred over the entire country.

Due to unusually favorable weather conditions, production rate per layer was 9.97 eggs, as compared with 8.97 eggs in January 1943 and 7.32 for the 10-year average. Record levels were attained in all parts of the country except the South Atlantic and South Central States, where the rates of lay were below last year's levels. In the North Central States the rate of lay on February 1 was equal to that usually reached by March 1.

Pullets not yet of laying age in farm flocks on February 1 numbered 37,718,000, or 4 percent fewer than the record of a year ago, but 7 percent above the total on February 1, 1942.

Egg production probably will continue larger than a year earlier through the first half of 1944, but in the last several months of this year it is likely to be lower than last year's record. Total production for the year may be from 2 to 4 percent larger than last year, or about 5.1 billion dozens for farm and nonfarm output.

Wholesale egg prices declined somewhat from mid-January to mid-February, being on the latter date about the same as a year earlier to two cents per dozen lower.

On February 15, chicken prices received by farmers averaged 23.7 cents per pound live weight, compared with 22.8 cents a year earlier and 13.7 cents for the 10-year average. Turkey prices went down 1 percent by February 15, averaging 32.0 cents per pound live weight, as compared with 28.7 cents a year ago and 15.5 cents for the 10-year average.

## FARM LABOR

**F**ARM WAGE rates averaged higher in 1943 than any other year of record. At 264 percent of the 1910-14 average, the general level of all farm wage rates was 63 points higher than in 1942, and 22 points higher than in the previous record year of 1920.

The general level of farm wage rates on January 1, 1944, was at its highest point for that date in 20 years—275 percent of the 1910-14 average, a decline of 5 points from October 1 but 51 points higher than a year ago.

Pronounced increases over last year were noted in all parts of the country, ranging from \$5 more per month than in January 1943 in the East South Central States to \$15 higher in the Mountain States. Wages per month without board were up from \$6 in the East South Central region to \$28 in the Pacific States. Day wage rates also showed decided increases in all sections of the Nation. Moreover, although monthly farm wage rates with board are usually lower in the last quarter of the year, they dropped less than seasonally in 1943 and in some regions actually increased.

Although somewhat larger than a year ago, the number of hired workers on farms January 1, estimated at 1,580,000, was 4 percent smaller than the 5-year average for January 1, 1938-42. The increase over last year has been ascribed to better working conditions last fall, and to the desire of farmers to keep their hired workers in anticipation of the heavy work load expected in the spring.

The 6,622,000 family workers estimated as being on farms in early January represented a larger group than a year earlier, but 3 percent fewer than the January 1, 1938-42 average.

## FRUIT

**T**HE 1943 pack of canned fruits is indicated at about 45 million cases (equivalent 24 No. 2½ cans), or about

one-fourth smaller than that of 1942. However, the 1943 fruit juice pack (citrus juice from the 1942-43 crop of citrus fruit, and other juices from the 1943 pineapple and deciduous crops) is indicated to be about 32 million cases, or one-third larger than the preceding pack.

The supply of canned fruits available for civilian consumption during the 1943-44 marketing year probably will not exceed 70 to 75 percent of the quantity consumed by civilians in 1942-43. Civilian consumption of fruit juices in 1943 is indicated to about equal that in 1942.

The per capita supply of fresh citrus fruit for civilians in 1944 may exceed 1943 consumption by approximately 10 percent. Larger orange supplies account for most of the increase.

## COTTON

**D**URING the first half of the 1943-44 season cotton consumption totalled 5.1 million bales, of which 21,635 bales were American-Egyptian cotton and 58,162 bales were foreign. This compares with 5.6 million bales during the corresponding period a year earlier, of which 25,723 bales were American-Egyptian and 92,109 bales were foreign.

On a daily basis, this amounted to a decline in total consumption of 10 percent. Annual consumption rates for American-Egyptian and foreign cotton dropped 17 percent and 38 percent, respectively. It now appears that the 1943-44 consumption will be about 10 percent lower than in 1942-43 (11.1 million bales), or approximately 10 million bales.

Reductions in the daily rate of cotton consumption have occurred mostly in non-cotton-growing States. The percentage decline from the peak level of April 1942 has been only about one-half as great in the cotton-growing States.

Chief factor in lowered cotton consumption is a tight labor situation. From 1940 until the last few months



employee turnover in the mills increased steadily. A byproduct of this was the necessity for employing many inexperienced workers. In addition, there has been a net decline in the total number of employees. In November 1943, 489,000 workers were employed, or a drop of 7.4 percent from the peak employment in December 1942 of 528,000 workers.

Cotton prices have recently strengthened somewhat and the 10-market average price of 20.8 cents in February was the highest since last July.

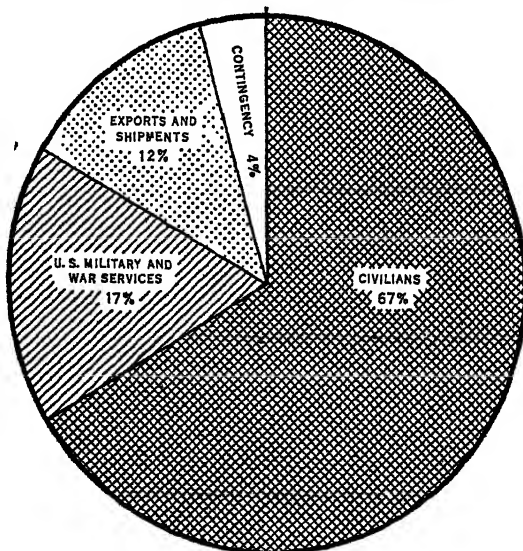
The loan programs for 1943 and 1944 crops of American-Egyptian cotton, and the 1944 crop of Sea Island cotton, announced by the War Food Administration on February 10, will have particular significance for lower grades of these types because they are not included in the present purchase programs. The loan rate for the basic

quality of American-Egyptian cotton (Grade No. 2,  $1\frac{1}{8}$  inches) will be 40.80 cents per pound, not weight, in the Arizona-California area, and 41.05 cents per pound, not weight, in the New Mexico-West Texas area.

The loan rate for the basic quality of Sea Island cotton (Grade No. 2,  $1\frac{1}{8}$  inches) will be 45.00 cents per pound, not weight, at all locations. Loan rates for Sea Island cotton will average approximately 2.25 cents per pound higher than the loan rates for the same qualities of American-Egyptian cotton. This spread reflects the approximate market difference between these two types of cotton.

A separate parity price (base period August 1922-July 1929) for American-Egyptian cotton has recently been announced. On January 15, 1944 the parity price for this cotton was 42.36 cents per pound.

#### MEAT ALLOCATION OF THE WAR FOOD ADMINISTRATION FOR 1944



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

# Livestock and Feed in 1944

**A**BOUT 171 million grain-consuming animal units were on farms January 1, 1944, the largest number ever recorded. On that date stocks of corn and oats, totaling 68 million tons, were 11 million tons less than a year earlier, but were 18 million tons more than the average for the 10 years 1930-39.

Total feed supplies in 1944 will depend in considerable part on the outcome of this year's feed crops. Achievement of the 1944 production goals for corn, oats, barley, and grain sorghums, with the assumption of average yields per acre, would result in a total output of feed grains 3 to 5 percent less than the output in 1943 on approximately the same total acreage. With less grain on hand January 1 than a year earlier, total feed grain supplies would thus be about 10 percent smaller in 1944 than in 1943. But yields per acre, of course, could again be above average in 1944 if the weather is good. Present indications point to a third less wheat available for livestock feed in 1944 than in 1943. On the other hand, if oilcrop production goals are met, the supply of high protein feeds would be slightly larger than in 1943.

## Reduced Livestock Output

With average weather, livestock output—measured in terms of total gain in the farm weight of meat animals and poultry, and in total production of milk and eggs—is likely to be somewhat smaller in 1944 than the record output of 1943. This decrease will be reflected primarily in a reduced pig crop, a smaller number of chickens raised, a slightly lower production of milk, and lighter feeding of beef cattle. The lamb crop also will be lower than last year because of the large ewe slaughter during the past 12 months.

The number of sows to farrow in the spring season of 1944 is expected to be about 16 percent less than in the spring

of 1943, if farmers' intentions reported on December 1, 1943, are borne out. Present indications are that the spring pig crop this year may be about 62 million head compared with 74 million head in the spring of 1943. The fall pig crop in 1944 also may be substantially lower than the record fall crop last year, when nearly 48 million pigs were saved. Despite these reductions, the total pig crop in 1944 would still be the second or third largest on record, being close in size to the very large crop of 1942 when 105 million pigs (spring and fall combined) were saved.

Other indications of a reduction in livestock output in 1944 include a reported decrease of 16 percent in the number of cattle on feed for market on January 1 compared with a year earlier, a decrease of 15 percent in the number of sheep and lambs on feed, a decrease of 3 percent in milk production per cow, and an intended reduction of 17 percent in chick purchases. On the other hand, the total numbers of milk cows, other cattle, and chickens on farms January 1 this year were the largest for all years on record, and the January rate of egg production per layer also was a record high.

A sharp distinction should be made between livestock production on farms and meat production resulting from the slaughter of livestock. Meat production in 1944 is expected to be larger than in 1943. Between 23 and 24 billion pounds (dressed weight) of pork, beef, veal, lamb and mutton were produced in 1943. Meat output in 1944 probably will equal or exceed 25 billion pounds, with hog and cattle slaughter increasing but sheep and lamb slaughter declining.

## But More Pork and Beef

During the first 9 months of the year hog slaughter will come largely from the 1943 pig crop of 122 million head. Allowing for death losses, the

October-December 1943 slaughter and some reduction in the size of the breeding herd, hog slaughter from January through September 1944 would exceed all previous records. However, with a reduction in the size of the spring pig crop in prospect, the number of hogs marketed in the period October-December 1944 may be less than the number slaughtered in the corresponding period of 1943. Hogs slaughtered in 1944 probably will average somewhat lighter in weight than in 1943.

Cattle and calf slaughter in recent weeks has been running at a considerably higher level than a year ago, reflecting the record number of cattle and calves on farms as well as the tightness in winter feed supplies. During the coming months, poor pasture and range would induce heavy cattle marketings as would prospects for a decline in cattle prices. If feed supplies are adequate and the prospect continues favorable for high cattle prices, cattlemen may tend to maintain numbers on farms near the present high level. With a large breeding herd and a large calf crop expected, cattle and calf slaughter could be increased in 1944 without causing a reduction in the number of cattle and calves on farms from the beginning to the end of the year.

The number of sheep and lambs on farms January 1, 1944, was again reduced from a year earlier. With fewer breeding sheep, the lamb crop is likely to be smaller this year than last. Even if some further liquidation of ewes occurs this year, slaughter of sheep and lambs is likely to be less than in 1943.

### **Lowered Milk Production**

Milk production in 1943 was about 118 billion pounds. The milk production goal for 1944 is 121 billion pounds. Achievement of this goal will mean increased cow numbers, diversion of feed from other livestock to dairy cows, and maximum production of pasture and other feed crops. If

present trends continue, milk production may be nearer 116 billion pounds in 1944, with output during early 1944 about 2 percent less than last year and perhaps approaching the 1943 level near the end of the year.

Farm marketings of fowl, culled from laying flocks, probably will be larger than a year earlier in much of 1944, with the greatest gain over 1943 likely at the close of the spring period of flush egg production. A reduced commercial hatchery output in late 1943 and early 1944 suggests that marketings of commercial broilers and fryers in the next few months will be smaller than a year earlier. For 1944 as a whole it is likely that increased marketings of fowl will about offset decreased marketings of young chickens, and total slaughter of chickens will about equal the record of approximately 3,800 million pounds dressed weight established in 1943.

### **Increased Egg Output**

With a record number of layers on hand at the beginning of the year and a high rate of egg production per layer, total egg production in the first half of 1944 probably will be larger than in the corresponding period of 1943. In the second half of 1944, egg production may fall below the record output of the second half of 1943, depending partly on the extent of culling of fowl from laying flocks after the spring months. At present it seems likely that total egg production in 1944 may be 2 to 4 percent larger than the 4.97 billion dozen produced in 1943.

Thus it is probable that the output of livestock products, as a whole, will be larger in 1944 than in 1943, even though livestock production on farms may be smaller. Livestock numbers at the end of 1944, especially numbers of hogs and chickens, are likely to be smaller than at the beginning. The demand for feeds next fall and winter will be somewhat less strong than in the past fall and winter. The supply of feeds in the next feeding year of

course will depend in large measure on the outturn of feed crops this year and on the actual extent to which livestock numbers are adjusted downward during the course of the year.

### New Livestock-Feed Balance

To conserve feed supplies and to direct livestock production into most essential channels, the 1944 goals call for increases in milk and egg production, but decreases in the size of the pig crop, in the number of chickens and turkeys raised, in commercial broiler production, and in the number of beef cattle and sheep on farms. Other measures for adjusting livestock and feed supplies include: (1) The distribution of substantial quantities of wheat acquired from domestic loan programs and from foreign purchase, (2) distribution of oilcake and oilmeal to areas most critically in need of protein feed supplies, (3) payment of the

difference between purchase costs and local selling prices for hay shipped into areas affected by drought in 1943, and (4) payments to milk and butterfat producers to enable them to meet advances in production costs since September 1942.

Many other adjustments have been made, and are being made, by farmers. But the most important changes to reach a better balance will be the diversion of feeds to milk cows and laying hens so far as practicable, the reduction in sow numbers, the feeding of hogs to lighter weights, and the increased marketing of beef cattle on individual farms. When this balance has been reached, livestock output can still be held at a high level, although not so high as in 1943, provided the feed-crop production goals are reached and average weather or better prevails in the next few years.

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## 1943 Cash Farm Income

PRESENT estimates place the 1943 cash income from farm marketings at 19.1 billion dollars. This amount, although slightly smaller than was anticipated in the autumn of 1943, is much the largest on record, exceeding the total in 1919 by 31 percent. The shift in American agriculture since World War I toward emphasis on livestock is reflected in the cash income figures. Returns from crops in 1943 totalled 7.9 billion dollars, 3 percent more than in 1919, while income from livestock in 1943 amounted to 11.2 billion dollars, or 62 percent more than in 1919.

Prices received by farmers for crops averaged 19 percent lower in 1943 than in 1919, while prices received for livestock were 3 percent

lower in 1943 than 1919. Production, on the other hand, has been much larger throughout this war than during World War I. The output of crops for sale and home consumption in 1943 was 9 percent smaller than the record breaking output in 1942 but was nevertheless 23 percent above 1919. Production of livestock (including livestock products) set a new record in 1943, 53 percent more than in 1919.

Table 1 compares cash farm income in 1942 and in 1943, by commodity groups.

Returns from all groups of crops were larger in 1943 than in 1942, but relatively largest gains were made by vegetables, fruits and nuts, and feed grains. All groups of livestock com-

Table 1.—1942 and 1943 Cash Income  
From Farm Marketings, by Com-  
modity Groups

Commodity	1942	1943	Percent increase
	<i>Mill. dol.</i>	<i>Mill. dol.</i>	
Food grains.....	914	932	0.8
Feed grains and hay.....	815	1,114	36.7
Cotton and seed.....	1,214	1,412	15.5
Cotton lint.....	1,049	1,210	15.3
Oil-bearing crops.....	468	611	30.6
Tobacco.....	474	657	17.5
Vegetables.....	1,081	1,624	41.0
Truck crops.....	686	937	40.7
Fruits and nuts.....	828	1,160	40.4
Other crops.....	535	573	7.1
Total crops.....	6,387	7,803	21.7
Meat animals.....	4,811	5,593	23.7
Dairy products.....	2,332	2,705	16.0
Poultry products.....	1,048	2,322	40.9
Other livestock.....	205	209	2.0
Total livestock.....	8,996	11,119	24.4
Total market- ings.....	15,383	19,922	24.1

modities likewise gave farmers larger returns in 1943 than in 1942, but poultry and eggs made the largest relative increase—41 percent.

For some commodities the large increase in income was due mostly to price increases, while for others the increase in income was mostly due to larger sales. Table 2 compares the changes from 1942 to 1943 in production, farm prices, and cash farm income for the various groups of commodities. The production column shows percentage changes in the quantities of crops harvested in 1942 and 1943, not the quantities sold in the two calendar years. Although the production of the oil-bearing crops (soybeans, peanuts, and flaxseed) was only 3 percent larger in 1943 than in the previous year, the quantity sold was much larger. This was because the 1942 production of these crops, much of which was sold in 1943, was 76 percent larger than 1941 output, much of which was sold in 1942.

Because of differences in weather and other growing conditions and also because of differences in economic factors, changes in farm income from one year to the next are not the same for all States. From 1942 to 1943

cash income from farm marketings for the United States as a whole rose 24 percent. Increases in the individual States ranged from 48 percent in Florida and 42 percent in Arizona to 8 percent in Oklahoma. Throughout the East North Central and North Atlantic Regions the increases were generally less than the national average, but Maine and Connecticut showed increases of 38 and 31 percent, respectively.

Income from crops was larger in 1943 than in 1942 in all but two States—Kansas and Oklahoma. The decline in Oklahoma, amounting to 20 percent, indicates the effects of the serious spring flood and the summer and fall drought. In contrast to these declines, the increase in 1943 crop income over 1942 was over 50 percent in Arizona, Florida, Maine and Connecticut, and more than 40 percent in North Dakota. Increases of 30 to 40 percent were recorded in Iowa, New Jersey, Colorado, California, Montana, Nebraska, South Dakota, Massachusetts, Minnesota and Oregon.

For the country as a whole, cash income from marketings of livestock

Table 2.—1943 Changes From 1942 in  
Production, Farm Prices, and  
Cash Farm Income

Commodity group	1943 change from 1942		
	Pro- duction	Prices	Income
	Per- cent	Per- cent	Per- cent
Food grains.....	-22	23	1
Feed grains and hay.....	-11	32	37
Cotton and cottonseed.....	-11	-----	14
Cotton.....	-11	7	15
Tobacco.....	0	29	18
Oil-bearing crops.....	3	10	81
Vegetables.....	-----	-----	41
Truck crops.....	-0	50	41
Potatoes, sweetpotatoes and dry edible beans.....	17	-----	39
Fruits and tree nuts.....	-10	87	40
Total crops.....	-9	29	24
Meat animals.....	14	11	24
Poultry and poultry prod- ucts.....	18	26	41
Dairy products.....	-1	19	16
Total livestock.....	10	16	24
Total crops and livestock.....	2	21	24

<sup>1</sup> Includes cottonseed.

was 24 percent higher in 1943 than in the preceding year. Two groups of States showed greater than average increases. One group extended from Delaware, Maryland, and West Virginia in the north, southwestward through North Carolina, Georgia, Florida, Kentucky, Tennessee, Mississippi, Alabama and Louisiana. In the other group, Nebraska showed the greatest increase, amounting to more than 40 percent, but substantial gains were shown by the Dakotas, Kansas, Oklahoma, Texas, Colorado, New Mexico, and Nevada. In the Southeastern States the principal factors in the increased income from livestock were larger sales of hogs, chickens, broilers, and mink. In the Great Plains Area, larger sales of hogs and

cattle were primarily responsible for the rise in income.

In the nip-and-tuck contest for the position as number 1 State in cash farm income, Iowa beat California for the 4th consecutive year. California held first place from 1930 to 1939. Texas, which was in first place in all but one year from 1924 to 1929, held third place in 1941. In 1942 and 1943, however, Illinois nosed out Texas and took third place. The greatest changes in rank from 1942 to 1943 were made by Arkansas, which fell from 20th to 24th, and by South Dakota and Florida, which rose from 23rd and 28th, respectively, to 20th and 25th.

C. A. GIBBONS

*Bureau of Agricultural Economics*

## Improved Grains Bring Higher Yields

**B**ECAUSE they have brought so many of their accomplishments to fruition at a time of great need, plant breeders are being recognized for their importance in making better living possible to more people.

Although the development of hybrid corn for higher yields and other valuable characteristics has been under way by scientists of the U. S. Department of Agriculture and State experiment stations for many years, it has been only in the past two or three years that a considerable percentage of America's total corn acreage has been devoted to hybrid corn.

### Half of Corn Acreage Hybrid

In 1943 hybrid corn was grown on more than 52 percent of our total corn acreage and on more than 99 percent of the acreage in Iowa. Despite last year's none too favorable season the corn crop was some 3,076,000,000 bushels, the second largest on record—

surpassed only in the bumper year of 1942 with nearly ideal growing conditions. The third largest crop of some 3,071,000 bushels was produced in 1920, another unusually good season. But in that year it took 101,360,000 acres to produce a trifle smaller crop than the one produced in 1943 on only 94,790,000 acres. In other words, in 1943 we used 6,570,000 acres less land to grow about the same crop produced in 1920. The wider use of hybrid corn in recent years is an outstanding factor in explaining this achievement.

Many people throughout the country have heard of Thatcher wheat, but perhaps not many know that this variety, resistant to stem rust, is already on the way out. With present-day procedures and much valuable plant material to work on, the plant breeders keep the improved kinds moving in an ever-ascending series, much as automobile makers kept im-

proved models rolling off the assembly lines. Thatcher was first distributed in 1934 and by 1939 was grown on nearly 15,000,000 acres in the United States and Canada. Its stems were practically rustproof but its leaves did not resist leaf rust. As a result Thatcher began to give way almost immediately in Minnesota and the eastern Dakotas to two new varieties developed by the Department and State experiment stations. The new ones, Rival and Pilot, out-yield the famous Thatcher 7 to 10 bushels per acre in leaf-rust years. Even in nonrust years they are just as good or a little better. They probably will occupy more and more acres unless the crop improvers bring out still better ones, which there is every reason to believe they will. Several new disease resistant varieties of winter wheat have also been distributed in the last 2 years.

#### Improved Oat Strains

Oat varieties, too, have been improved regardless of the fact that the horse, formerly the oat bin's chief customer, has greatly decreased in number. To illustrate, there were 24,211,000 horses and mules on farms in the United States in 1910 and that year the country grew 1,106,162,000 bushels of oats. There were slight ups and downs in total oats as three decades rolled by, but in 1940 the total production was 1,246,050,000 bushels. And yet the old feed box customers have fallen away to almost half the 1910 number—down to 13,932,000.

The grain is now fed in greater quantities to other farm animals and is used as human food, but a big factor in the crop's popularity is the greater yield the plant breeders have made possible by originating more productive varieties with resistance to the smuts and rusts. Recent estimates by the Crop Reporting Board of the U. S. Department of Agriculture show that in Iowa and Wisconsin where the new varieties have been most widely

adopted the average yield is 39 bushels to the acre, in each case about 8 bushels more than usual. In Iowa 60 percent of the oats acreage produced the new varieties in 1943, and in Wisconsin 50 percent. Yields were up also in all States adjoining Iowa and Wisconsin. The 1943 acreage devoted to the new varieties is estimated at 7,000,000—about one-fifth of the total for the United States.

#### 40 Percent of Barley Barbless

The breeding of improved barley varieties with smooth awns has made this crop more popular with farmers. The coarse barbed awns of the varieties formerly grown caused mouth sores of livestock, reduced the feeding value of barley grain, and made it disagreeable to handle during harvest. Plant breeders of the Department found varieties which had awns with no barbs and this character was transferred to high-yielding varieties adapted for growing in the major barley growing areas. The first of these varieties with smooth awns was distributed for commercial growing about 15 years ago. It is estimated that about 40 percent of the present barley acreage is planted to smooth awned varieties. A number of new improved varieties with smooth awns and greater resistance to one or more of the crop hazards, drought, diseases, insects and lodging, have been distributed to growers in Minnesota, Wisconsin, North Dakota, Montana, Utah, Colorado, Texas, and North Carolina.

An important factor in this barley breeding work is the world collection of 4,000 varieties maintained by the Bureau of Plant Industry, Soils, and Agricultural Engineering. Each variety is grown every 5 years so as to keep viable seed available for breeding purposes at all times. The collection is second in size only to a Russian Government collection. As an example of the usefulness of this collection barley breeders are now working to develop varieties resistant to aphids, or green bugs, which are very destruc-

tive in Texas and Oklahoma barley fields, causing a loss in 1942 of more than \$3,000,000. A number of varieties resistant to green bug, but not otherwise adapted to the Texas-Oklahoma region, were found in the collection and are being used to breed adapted varieties resistant to this pest.

#### **Wilt-Resistant Flax Ups Yields**

The varieties of flax grown when the new lands of Minnesota and the Dakotas were first cropped can no longer be produced in this region because, after a few crops of flax, the soils became infested with a disease known as wilt, which seriously reduced yields of these susceptible varieties. Plant breeders developed such wilt-resistant varieties as Bison, which made continued flax production possible. After Bison had become widely grown, seasons favorable for the flax rust occurred and this disease took a heavy toll. In the flax-breeding program, plant breeders crossed such adapted varieties as Bison with unadapted rust-resistant varieties, and developed the new varieties Crystal and Koto which are resistant to wilt and also to rust. Varieties resistant to wilt and rust are now widely grown and have made possible the large production of linseed oil for war purposes during the present emergency.

A marked increase in the acreage sown to improved rice varieties has occurred in recent years. For example, in 1933 only 8.3 percent of the southern rice acreage was sown to varieties released by the cooperative Federal-State rice experiment stations, whereas in 1943, 46.5 percent of the acreage was sown to Station varieties. In 1933, the older varieties Blue Rose

and Early Prolific were sown on 88 percent, but in 1943, on only 51 percent of the Southern rice acreage. These varieties, especially Blue Rose, are being replaced by the disease-resistant improved Rexoro, Fortuna, Nira, and Zenith varieties. The latter varieties yield better than Blue Rose and sell for a higher price, especially Rexoro and Nira.

Rye differs from the other small grains in being a cross-pollinated plant. Because of this characteristic little progress has been made in breeding new improved varieties of this crop. A few improved varieties, however, have been made available to farmers. Among these are the Rosen variety, developed in North Dakota, and Abruzzi, introduced from Italy by the Department of Agriculture. Abruzzi is the most extensively grown variety in the Southern States.

#### **Sorghums Tailored to Harvester**

Even grain sorghums, which produce good feed grain crops west of the corn line on subhumid land, have been bred up by the plant breeders in what might be called a finishing touch to nation-wide cereal improvement. Not only have the breeders produced high-yielding varieties resistant to disease but they have tailored them to suit the demands for harvester-thresher harvesting, making the stalks straight and about the height of wheat and taking the droop from the seed heads. Here is a case of the engineers and the agronomists meeting half-way—not unusual these times—to get the most from a crop with the minimum of labor.

B. B. BAYLES, *Bureau of Plant Industry, Soils and Agricultural Engineering*

**CORRECTION**—On the cover of the *Agricultural Situation* for January 1944 appeared the statement which read in part "highest farm prices in history." This was a typographical error. It should have been "highest farm income in history." See income story on page 11 of this issue.



# Wartime Changes in Crop Reporting

**W**ARTIME brings an increased need for information on crop and livestock production, agricultural prices, and stocks of commodities available for distribution. While the patriotic urge to help in the war effort stimulates the spirit of cooperation among farmer-reporters, information is obtained with increasing difficulty. Like many other agencies, the Crop Reporting Board finds itself faced with a greater demand for its services at a time when its facilities are greatly restricted.

The voluntary cooperation of the thousands of public-spirited farmers and dealers in agricultural products has made it possible for the Department of Agriculture to supply information on developments on the farms and in the farmers' market places. The Department has found it possible to pass this information back to the public as a basis of action for the farmer, dealer, and consumer alike. The information has been basic to the actions taken by the Department's agencies in the complex and difficult job of directing the combined efforts of the nation's farmers to bring about the best balanced production possible under wartime conditions, to provide those products most vitally needed by our armed forces, our civilians, and our allies in the prosecution of the war.

## Balanced Crop Output

A nation at war on the colossal scale of the present conflict needs to direct its energies toward a production which is in the best possible balance with its needs. Weather permitting, agricultural production has to be attuned to a balanced output of crops and livestock products to maintain the health and vigor of the civilian population while providing ample supplies for the armed services and filling the gaps in the supplies of our allies.

Such production is stepped-up production—greater than the average of recent years. But care must be taken lest over-production of one commodity may take place at the expense of under-production of another.

## Adequate Information Essential

Intelligent advice to farmers or intelligent direction to their efforts requires adequate information concerning each commodity not only now but over a period of past years. It was fortunate that the Department had developed statistical information concerning agricultural production comprehensive enough to meet most of the needs of administrators who have to deal with the problems of food supply and its distribution to consumers, the armed services and to our allies.

An illustration of the need for timely information on production developments is the recent request made by the War Food Administration that the kraut industry process 80,000 tons of southern cabbage into kraut. Truck crop reports of last January indicated that a record production of winter cabbage would be produced in the southern States. This happened, in part a reaction to the short summer and fall cabbage crop in 1943, which was most marked in the case of kraut cabbage. To the extent it is possible to process part of the winter crop into kraut, a dual purpose will be served—wastage of part of the over-supply of cabbage will be mitigated and a deficit of kraut production will be made up.

Attributable directly to the war is the initiation of reports on strictly war crops. Among these are the reports on hemp, with greatly expanded acreage and production, under Government stimulus, to meet increased military needs which have been accentuated by decreased imports of fibers. Another adaptation to meet

war conditions is the expanded service provided for soybeans, which have become a wartime crop of first magnitude. This important oil-bearing crop has been expanded greatly during the last few years and an improved service has been inaugurated in the form of earlier reports of acreage available for harvest as beans and earlier forecasts of production.

### **Additional Reports Needed**

The regular reports of crop production are not sufficient in themselves to provide the maximum information needed under war conditions. Frequent reports upon quantities remaining for distribution, that is to say, supplies on hand, are vitally needed. In keeping with these needs, additional reports have been prepared upon stocks of grains on farms, with country handlers and with processors. Commodity stocks not previously reported have been brought into the program of stocks reports. In the case of beans, quarterly estimates of stocks on farms and in the hands of country handlers and processors have been provided by varieties during the current storage season.

In the field of livestock statistics, annual livestock inventories, semi-annual pig crop estimates, and annual estimates of the calf crop and lamb crop are basic to the determination of meat production. The monthly reports of poultry and egg production are essential to the Department's program for making eggs available in dried form for the use of the armed forces and the allied nations. In like manner, the monthly estimates of milk production have a bearing upon the measures taken to allocate and distribute cheese, a food of magnified importance in wartime.

World War II has seen the development of stupendous complexities in the field of prices. A period of agricultural depression programs designed to alleviate price disparities for agricultural commodities by readjustments in production is in the past. Instead,

we are now in an era, on the one hand, of support prices designed to stimulate production of livestock products and crops, and on the other hand, of ceiling prices designed to prevent inflation by holding down consumer costs. As a result, there is an amazing interest in statistics of prices—prices received by farmers in relation to parity prices, in relation to support prices, and in relation to the ceiling prices of agricultural products and processed commodities made from them. Fortunately, prices have been reported currently upon practically all agricultural commodities, but the increased interest in price relationships has necessitated the publication of many additional price comparisons.

### **Farmers Chief Source of Data**

In obtaining information about crop and livestock production and agricultural prices, main reliance has been placed upon farmer-producers. Estimates of acreage and of livestock numbers are based upon samples of individual farms obtained in varying numbers at various times of the year. The most extensive are the cards delivered and returned by rural mail carriers in June, October, and December. Each rural carrier is asked to distribute 10 to 20 cards to farmers upon his route and to return the completed cards. This distribution is supplemented by direct mailings in areas where farmers are not served by carrier routes. There has been some falling off in returns but, by and large, farmers have found time to continue their assistance in this work.

The next in size is the list of a quarter million farmers who are asked in March to report their intentions to plant, and in June to report actual plantings of crops. These inquiries are basic to the Prospective Plantings Report in March and the July estimates of acreage for harvest, to which the production forecasts are tied. Here again there has been some falling off in returns due to the production demands upon the time of the farmer.

The 80,000 regular crop reporters continue to receive a general crop and livestock inquiry each month and their faithfulness in the face of their increased farm activities can be accounted for only by their public-spirited and patriotic interest in the work. Their returns have been made with increased patriotic fervor, but likewise with increased difficulty. After a busy day in the field, time and energy are not always available to complete and return the regular monthly crop and livestock schedules and such other inquiries as are directed to them with requests for additional information.

For years, dealers and processors in farm commodities have been the principal source of information concerning prices. They have been asked to report upon prices received by farmers and prices paid by farmers for commodities used in the farm business and in the farm home. It has been increasingly difficult for them to supply the information upon prices which is requested of them. And so it is a tribute to their patriotism and public interest that they have continued to supply this information in the face of the handicaps under which they operate.

JOSEPH A. BECKER  
*Chairman, Crop Reporting Board*

## Fruit Production Prospects for 1944

**P**RESENT prospects for 1944 fruit production point to a somewhat greater tonnage than harvested in 1943. A year ago conditions were also fairly favorable for fruit crops, but spring freezes in the eastern and central States and some western States, and a summer and fall drought in the South Atlantic area, reduced the tonnage of deciduous fruits harvested in these areas materially below average and below the large production of 1942. Citrus fruits, however, were not affected seriously by weather hazards, and total production of these from the bloom of 1943 is estimated to be the largest of record.

### Fruit Output Up 10 Percent

Assuming that growing conditions will be about average in 1944 in all sections of the country, total deciduous fruit production should be from 10 to 20 percent greater than the 1943 harvest but possibly 5 percent smaller than the large 1942 production. Considering the more important individual fruits this assumption (average growing conditions in 1944) indicates percentage increases in production in

relation to 1943 about as follows: Apples 25, peaches 50, pears 15; and decreases of about 10 percent for grapes and prunes. Average weather in citrus fruit areas in 1944 would maintain the supply of these fruits near the high level reached in the past 2 years.

### Weather Chief Factor

The most significant—and least predictable—factor affecting fruit production in 1944 is the weather. Spring freezes after the buds have started, as occurred in 1943, might reduce production of deciduous fruits materially. Low temperatures and excessive moisture at pollination time may reduce the set, and drought may be unfavorable for sizing of fruit. Tropical storms and winter freezes are recurring threats to citrus production and, of course, their occurrence cannot be predicted. During the past 8 seasons, storm or freeze damage has not been serious in any of the important citrus States. It seems unlikely that weather factors will be unfavorable for total deciduous fruit production two years in succession, although the long time

record shows relatively short crops in the consecutive years of 1909 and 1910; 1924 and 1925; 1933 and 1934.

Fruit production depends upon the number of bearing trees and yields per tree. Net changes in numbers of bearing trees usually occur gradually because removals tend to be offset by young trees coming into bearing, or vice versa. As only minor changes in bearing acreage are indicated for 1944, fruit production will vary from 1943 largely as yields per tree change. Many factors influence yields. Some of these can be evaluated for 1944 with reasonable certainty at this time. Fruit crops require timely and adequate spraying, pruning, and fertilizer application. Whether growers accomplish these things depends in a large measure upon the availability of materials and labor and upon whether the price outlook warrants the necessary expenditures. In 1943, deciduous fruit crops were generally short with prices much higher than in recent years.

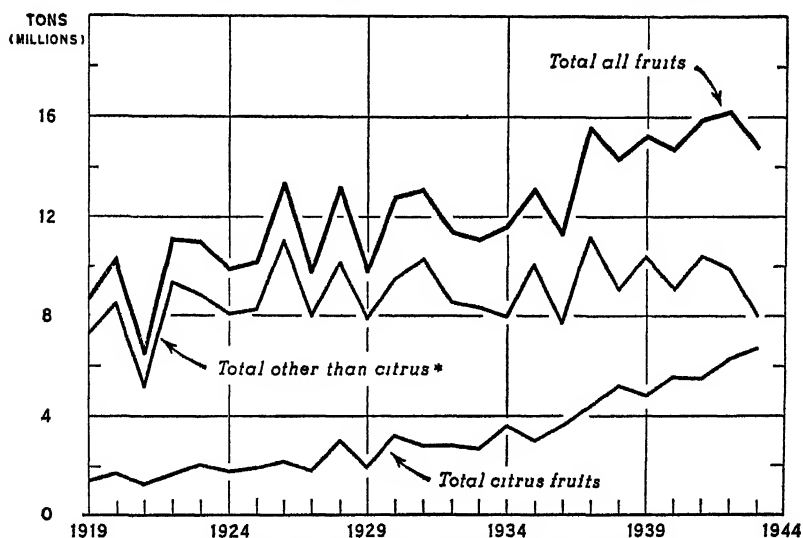
According to present indications, adequate financing, spray materials, necessary equipment (sprayers, trac-

tors, trucks, etc.) and supplies of labor will be available in most sections of the country. One or more of these items may prove to be a limiting factor on many farms, but it seems unlikely that they will materially limit the 1944 fruit tonnage.

With the relatively low prices for many years and the economies of large-scale operations, fruit production has tended to concentrate into larger individual units and into commercial areas. In general, these larger operators have pruned, sprayed and fertilized fairly well during the past few years and have made adequate preparations for the 1944 season.

In 1943 fruit production varied greatly by kinds and regions. Oranges, grapefruit, and grapes were record large crops. Commercial apples, peaches, and apricots were near-record small crops. Cherries and pears were the smallest crops in recent years. Total deciduous fruit production in the Eastern and Central States was much smaller than in 1942 and smaller than average. Winter and spring freezes, cold rainy weather

### FRUIT PRODUCTION: UNITED STATES, 1919-43



\* INCLUDES APPLES PEACHES PEARS GRAPES CHERRIES PLUMS PRUNES APRICOTS FIGS OLIVES, PINEAPPLES AVOCADOS CRANBERRIES DATES PERSIMMONS AND POMEGRANATES

at pollination time in many areas, and drought conditions in the South Atlantic States were unfavorable for deciduous fruit production in 1943. The record high California grape crop, combined with total tonnage of the deciduous tree fruits for the Western States as a group, resulted in near-average deciduous fruit production in this region.

Total fruit supplies have increased markedly during the last 25 years, production having averaged about 60 percent more during the past 5 years (1939-43) than in 1919-23. Production trends have varied greatly for different fruits and different groups of fruits. Citrus fruit production has increased steadily, the increase being greatest during the past decade. The combined production of oranges, grapefruit, and lemons averaged 5,782,000 tons in the 5-year (1939-43) period compared with 1,644,000 tons in the 5-year period 1919-23, an increase of 252 percent. Tonnage of these 3 principal citrus fruits was 45 percent greater in the past 5 years (1939-43) than in the preceding 5 years.

#### Large Citrus Plantings

Many large orange and grapefruit plantings of the 20's and 30's have now come into or approached full bearing capacity. Because of the relatively young average age of bearing trees and the maintenance of bearing acreage at present levels, some further expansion of citrus production

seems probable. These citrus fruits comprised about 39 percent of the total tonnage of all fruits produced in 1942 compared with only 16 percent in 1919.

#### Deciduous Trend Upward

The trend in total tonnage of all deciduous fruit has been slightly upward for the past 25 years but with varying trends for individual fruits. Apples, most widely grown and in most years having the greatest tonnage of any fruit, have declined moderately in production and are now surpassed by oranges. Grapes, second most important deciduous fruit in total tonnage, have increased slightly during the past 2 decades. Production of cherries and figs have increased sharply during the past 25 years. The average production from 1939 to 1943 of each was about  $3\frac{1}{4}$  times the average production from 1919 to 1923. Production of peaches, plums, prunes, and apricots has tended to remain at fairly constant levels except for year-to-year fluctuations. The decline in relative importance of deciduous fruits is indicated by a comparison of the proportion of total fruit tonnage, 83 percent in the 5-year (1919-23) period and 62 percent from 1939-43. Apples averaged 41 percent of total fruit tonnage in the earlier period, but only 23 percent during the last 5 years.

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## Revised Index of Prices Received by Farmers

SEVERAL improvements in the index of prices received by farmers increase its completeness and usefulness. Important changes in agricultural production during the past decade have made apparent a need for revision of weights and new groupings of commodities. This revision

does not affect parity prices in any way. The new index appears on page 24 of *The Agricultural Situation*.

Shifts in the relative price importance of farm commodities since 1934 have made desirable three main changes in the price index: (1) Certain commodities whose importance in-

creased since 1934 have been added while others becoming less important have been dropped, (2) weights used in representing the various commodities have been moved from the 1924-29 average volume of sales to the 1935-39 average volume of sales, (3) commodities have been regrouped to make the sub-indexes useful under present-day conditions.

### New Crops Added

Among commodities added to the index are: Soybeans, turkeys, peaches, strawberries, grapes. Widespread production of soybeans for oil has moved this commodity to the forefront since the mid-1930's. Increased output of peaches, strawberries and grapes, has led to their inclusion in the fruit index which previously included only apples, pears and citrus fruit. And because turkeys are now an important enterprise they have been added to the poultry index which had included only chickens and eggs. In contrast, horses and mules have been dropped from the price index because their

importance in farm operations has been steadily declining.

Moving the weights from a 1924-29 average of sales to a 1935-39 average of sales reflects the decreased relative importance of grains and cotton in farm income on the one hand, and increased importance of dairy products, meat animals and oil crops on the other. Although the weights have been changed to a more recent period, there has been no change in the base, August 1909 to July 1914, for the index numbers.

### Commodities Regrouped

Along with these improvements in the index, advantage was taken of the opportunity to regroup commodities into more useful major and sub-group indexes. The old groupings were: (1) All grains, (2) cotton and cottonseed, (3) fruit, (4) meat animals, (5) dairy products, (6) poultry and eggs, (7) truck crops, (8) miscellaneous commodities. The new groupings are indicated in the accompanying chart.

### New Commodity Grouping in Revised Price Index

All crops							
Food grains	Feed grains and hay	Tobacco	Cotton	Fruit	Truck crops	Oil crops	Field vegetables <sup>1</sup>
Wheat. Rye. Rice.	Corn. Oats. Barley. Hay.			Apples. Pears. Peaches. Strawberries. Grapes. Oranges. Lemons. Grapefruit.	Cauliflower. Green peppers. Snap beans. Cabbage. Celery. Carrots. Lettuce. Onions. Green peas. Spinach. Tomatoes.	Peanuts. Soybeans. Flaxseed. Cottonseed.	Dry beans. Potatoes. Sweet potatoes.

<sup>1</sup> Not shown separately in the index, but included.

Livestock and products			
Meat animals	Dairy products	Poultry and eggs	Wool <sup>1</sup>
Hogs. Cattle. Calves. Sheep. Lambs.	Wholesale milk. Retail milk. Butter. Butterfat.	Chickens. Turkeys. Eggs.	

<sup>1</sup> Not shown separately in the index, but included.

To adequately determine the relative position of the average price of crops and livestock it is important to have separate indexes for these two main groups. The recent increasing importance of domestic oil crops made it desirable to set up a separate index for these commodities. With cottonseed now included in the oil-crop group a separate index is shown for cotton

tant source of farm income a separate index is now shown for it. Potatoes, sweetpotatoes and dry beans are not listed separately but are included in the all-crop and all-commodity indexes. The old miscellaneous index has been dropped.

The over-all index on the new basis does not vary significantly in trend or

many months in the new series have been somewhat above the old since 1926. In December 1943 the two series were practically at the same level, the old standing at 197 of the 1909-14 base, while the new was at 196.

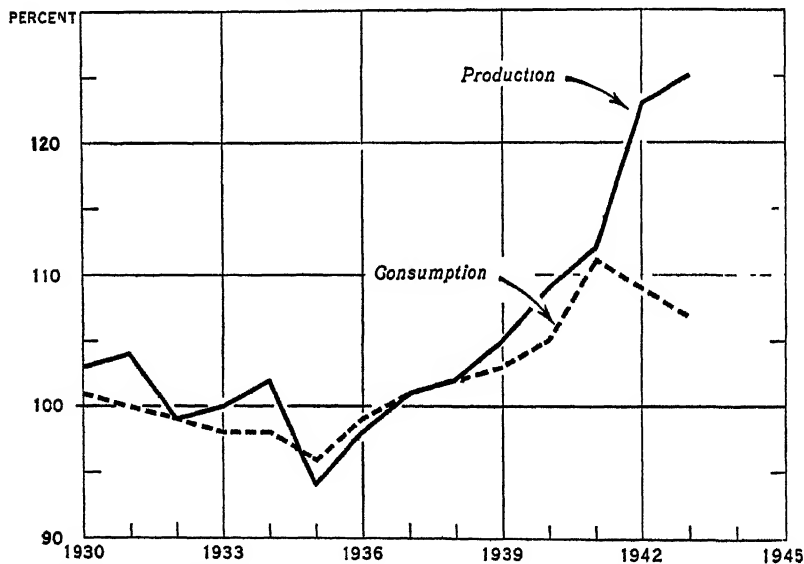
RALPH S. WOODRUFF  
*Bureau of Agricultural Economics*

## Nutritive Value of U.S. Food Supply, 1930-43

The charts on these two pages show the trends in United States food production and consumption as well as the nutritive value of the foods consumed. In brief—production, consumption, and nutritive value all moved upward from the middle thirties until 1942 when the war reversed the trend in total civilian consumption and in some nutrient intake. Recent enrichment of bread and flour, however, has materially increased the quantities of iron and B vitamins available in the civilian food supply. And greater milk consumption has resulted in an

### PER CAPITA PRODUCTION AND CONSUMPTION OF FOODS IN THE UNITED STATES, 1930-43

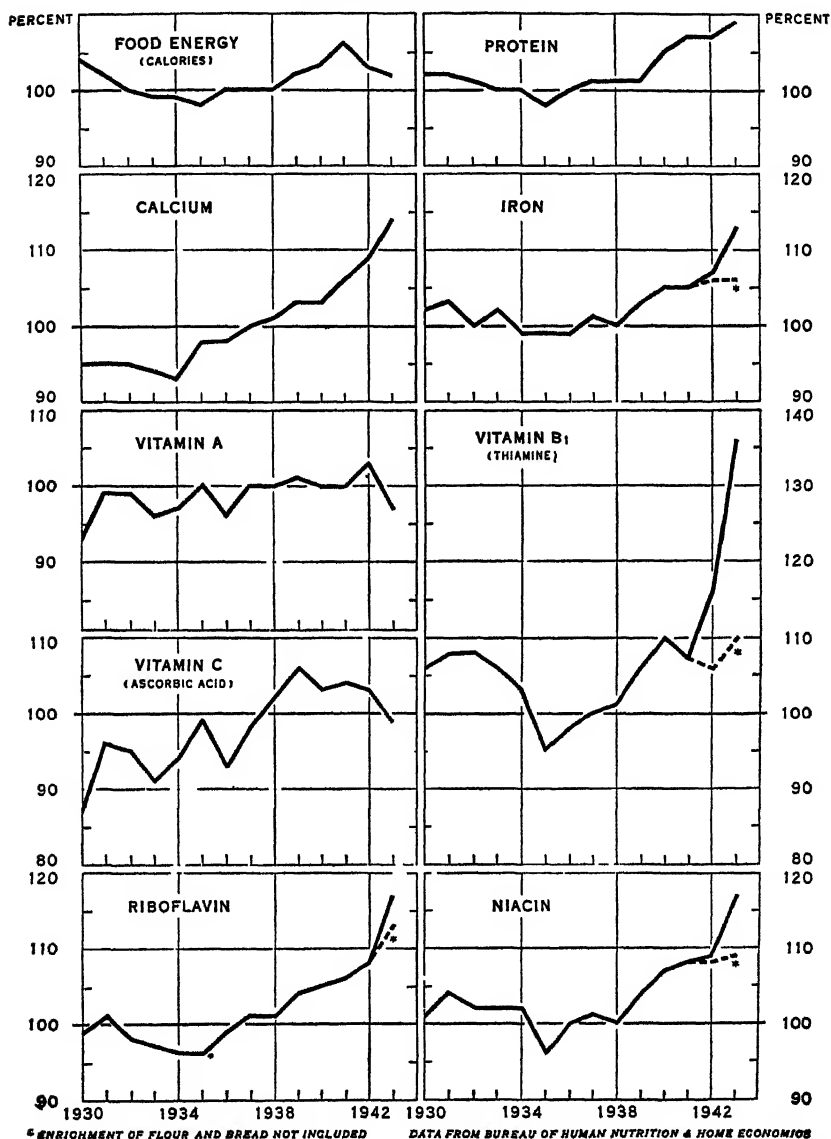
INDEX NUMBERS (1935-39=100)



upward trend since 1934 in both calcium and riboflavin intake. A discussion of these trends appeared in *the Agricultural Situation* for January. Some of the figures cited in that article, however, have been revised slightly in these charts. Estimates for 1943 are preliminary and subject to further revision. Per capita consumption of some nutrients, particularly vitamins A and C, may be underestimated for 1942 and 1943, since official data on vegetable production does not include victory garden production in towns and cities.

### NUTRITIVE VALUE OF FOOD CONSUMED PER CAPITA

INDEX NUMBERS (1935-39=100)





# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909- July 1914=100) <sup>4</sup>			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodi- ties	Commodi- ties, interest and taxes		Dairy products	Poul- try and eggs	Meat animals	All live- stock
1934.....	75	76	109	122	129	95	101	89	70	84
1935.....	87	86	117	125	130	103	114	116	116	115
1936.....	103	100	118	124	128	111	125	114	118	120
1937.....	113	117	126	131	134	126	130	110	132	127
1938.....	89	91	115	123	127	125	114	108	115	113
1939.....	109	105	113	121	125	123	110	95	112	105
1940.....	125	119	115	122	126	126	119	96	111	112
1941.....	162	169	127	131	133	154	139	121	146	140
1942.....	199	238	144	152	151	201	162	151	188	173
1943.....	239	304	151	167	164	264	193	190	209	200
1943-January.....	227	281	149	160	157	224	198	186	206	197
February.....	232	287	150	162	159	-----	190	172	216	199
March.....	235	295	151	163	160	-----	190	172	220	201
April.....	237	300	151	165	162	239	190	174	220	202
May.....	238	302	152	167	163	-----	189	175	216	200
June.....	236	304	152	168	164	-----	187	179	213	199
July.....	240	306	151	169	165	274	189	183	209	198
August.....	242	312	151	169	165	-----	192	192	208	200
September.....	* 245	* 315	151	169	165	-----	195	201	208	203
October.....	247	* 317	150	170	166	280	193	212	204	204
November.....	247	318	150	171	167	-----	202	219	193	201
December.....	* 241	316	151	173	169	-----	203	212	194	200
1944-January.....	243	-----	-----	174	169	275	201	177	194	193
February.....	-----	-----	-----	175	170	-----	201	168	190	194

Year and month	Index of prices received by farmers (August 1909-July 1914=100) <sup>4</sup>								Parity ratio <sup>5</sup>	
	Crops							Crops and live-stock		
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruits	Truck crops			All crops
1934.....	91	95	169	97	95	88	95	98	90	70
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	108	102	185	95	112	92	104	107	114	89
1937.....	120	125	204	90	120	104	110	115	122	91
1938.....	75	71	178	87	88	70	88	80	87	76
1939.....	72	69	155	70	90	68	91	80	95	75
1940.....	84	82	136	77	96	73	111	88	100	70
1941.....	97	89	159	107	130	85	129	106	124	93
1942.....	120	111	252	149	172	114	163	142	150	105
1943.....	148	147	325	160	190	179	245	183	192	117
1943-January.....	188	124	317	159	174	121	247	164	181	115
February.....	140	129	316	150	177	132	241	167	184	116
March.....	143	135	317	161	183	142	326	182	192	120
April.....	143	141	316	162	185	162	364	192	197	122
May.....	144	144	319	162	187	170	276	187	194	119
June.....	145	148	320	161	187	196	261	190	195	119
July.....	147	151	321	168	183	216	220	188	193	117
August.....	147	152	326	160	196	202	186	183	192	116
September.....	150	156	315	163	199	205	180	182	193	117
October.....	167	168	335	164	201	195	187	183	194	117
November.....	180	158	347	155	202	196	228	187	194	116
December.....	166	165	349	160	202	208	223	192	196	116
1944-January.....	170	168	350	162	203	204	267	199	196	116
February.....	170	169	348	161	205	206	247	196	195	115

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised, see discussion of revised index on page 20.

<sup>5</sup> Ratio of prices received to prices paid, interest and taxes. <sup>6</sup> Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION

MAY 1944

## *A Brief Summary of Economic Conditions*

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**A**PRIL'S COLD, WET WEATHER delayed spring crop preparations 2 to 4 weeks in most central and eastern States. Some midwest oat land is being diverted to corn or soybeans because oat planting was so far behind. Cotton planting has been delayed throughout much of the Cotton Belt, while southeastern truck crop growth is retarded and yields of some crops reduced, even though record tonnages are still indicated. \* \* \* Federally inspected hog slaughter of 22.4 million head during the first quarter of 1944 was 53 percent greater than in the same months of 1943, while federally inspected cattle and calf slaughter was up about 15 percent over the first quarter of last year. \* \* \* Commercially hatched chick output from January through May was expected to be about 18 percent less than the record a year earlier. \* \* \* Despite less output per cow, increasing milk cow numbers, incentive payments and favorable pasture conditions are all expected to bring 1944 milk production up to the 1943 output, 118 billion pounds. \* \* \* Winter wheat improved in April and output was forecast on May 1 at 662 million bushels—up 132 million from 1943.

# Commodity Reviews

## DEMAND AND PRICE

**D**EMAND for farm products continues at the high level achieved late last year, consumer incomes being more than sufficient to purchase all of the farm products available or likely to become available to civilians during 1944 at current stabilized prices. Salary and wage payments during February were 15 percent above those in February last year. Except for amounts demanded by higher taxes, increases in consumer incomes are available for purchasing larger volumes of goods and services, including farm products.

Retail prices generally are about 35 percent above their 1935-39 level. The dollar volume of sales of durable goods has been about maintained at the 1935-39 level, while that of non-durable goods has about doubled.

The index of the cost of living in large cities in the United States was 123.8 in March, the lowest figure since August 1943, when the index was 123.4. Recent declines in living costs resulted from declining food costs. The index of food costs was 2.9 points lower in March 1944 than in August 1943; nonfood costs were 2.7 points higher in March than the preceding August. The largest food cost decreases have been in eggs, fruits and vegetables, but the declines have been partly seasonal.

## LIVESTOCK

**M**EAT production through September is likely to continue at a heavier rate than last year, although supplies decreased seasonally this spring and will probably continue to do so this summer. It is likely that a decline in pork production will result in a smaller total meat production during the last quarter of the year than in the corresponding period in 1943. Hog slaughter late in the year

will consist largely of hogs from the spring pig crop, indicated to be smaller than the record 1943 spring pig crop of 74 million head.

The support price for Good and Choice 200- to 270-pound barrows and gilts is on a basis of \$13.75 at Chicago through September 1944, and for Good and Choice 200- to 240-pound barrow and gilts \$12.50 from October 1, 1944, to April 1, 1945. Anticipation of smaller slaughter supplies of hogs in the last quarter of the year (compared with a year earlier) makes it probable that hog prices will remain above the reduced support price level during this period.

Hog slaughter in federally inspected plants during the first quarter of 1944 totaled 22.4 million head, 53 percent higher than in the same period last year after allowing for war-duration plants. Through September, the slaughter of hogs each month will probably exceed last year's figure.

The number of cattle on feed in the 11 Corn Belt States on April 1 was 23 percent, or between 300,000 and 400,000 head, lower than a year ago. Decreases occurred in all States except Wisconsin, with the largest relative decrease in Minnesota.

Cattle and calf slaughter of all types in the January-March period this year was about 15 percent larger than a year ago. Relatively heavy marketings are expected to continue through the summer. From October through December, when receipts of grass-fat range cattle are largest, slaughter will be increased.

While there has been little change in prices for choice and prime, and good steers since June 1943, prices for low-grade steers and cows have risen since the first of this year, and indications are that they will not show a decline until grass-fat cattle marketings begin late in the summer.

A 6-percent decrease in the early spring lamb crop is expected to result in fewer lambs for slaughter this year than in 1943. Fewer breeding ewes on farms may in turn bring about a smaller total lamb crop. Ewe slaughter is expected to be at a relatively heavy rate in 1944.

## DAIRY PRODUCTS

**M**ILK COW numbers, which were 12 percent larger on January 1 than a year earlier, probably will continue their upward trend during the year, a result of the large number of heifers kept for milk cows and the relatively high price of cows for milk compared with their slaughter price. Milk production in 1944 may be 2 billion pounds more than the 116 billion pounds anticipated earlier, or about the same as the 118 billion pounds produced in 1943.

Butter and cheese supplies for civilian consumption are larger for the current quarter than in January-March, even though the setting aside of butter was resumed in April by the War Food Administration. However, the 1944 program began with 10 percent of production required to be set aside, compared with 30 percent in April 1943.

Creamery butter production during the first quarter of 1944 was 333 million pounds, 13 percent less than a year earlier, while total cheese production of 202 million pounds was up 1 percent.

Milk production during the first third of 1944 was 37.2 billion pounds of milk, 0.3 percent above the same period a year ago. Milk production on farms in 1943, second highest in the Nation's history, was approximately one percent lower than in 1942. Farmers sold milk, cream, and farm-churned butter in an amount representing 97½ billion pounds of milk, or about five-sixths of the milk produced. A

record amount of whole milk was sold to plants and dealers, but quantities of cream, retail milk, and farm butter sold by producers were less than during 1942.

Farm prices on April 15, milk equivalent basis, were higher than a year earlier. Also, dairy production payments increased returns by another 55 cents per 100 pounds over 1943 for whole milk sales and 8 cents per pound for sales of butterfat. The advance in the cost of grain and other concentrates fed to milk cows in areas selling whole milk amounted to 20 percent from April 15, 1943 to April 15, 1944. The ratio of whole milk prices to feed prices, including production payments, was 1.37 in mid-April as compared with 1.34 a year earlier.

## POULTRY AND EGGS

**T**HE EARLY spring rate of culling laying flocks was comparatively low for the season. Chick demand decreased considerably with the decline in egg prices, indicating the likelihood that chick purchases would fall into line with early February intentions to purchase 17 percent fewer chicks this year than last. Beginning not later than next fall, the number of layers probably will be smaller than a year earlier.

The announced support price for the spring and early summer is a United States average price of 30 cents a dozen to farmers. To implement this, support prices have been announced in terms of specific grades and sizes at designated points throughout the Nation. There is likely to be a considerably higher increase in egg prices from spring to fall this year than last, while the total egg production decreases seasonally from early May to November.

Farmers grossed a record 2½ billion dollars in 1943 from chickens and eggs, including commercial broilers. Around

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	157	115
February.....	184	159	116
March.....	192	160	120
April.....	197	162	122
May.....	194	163	119
June.....	195	164	119
July.....	193	165	117
August.....	192	165	116
September.....	193	165	117
October.....	194	166	117
November.....	194	167	116
December.....	195	169	116
<b>1944</b>			
January.....	196	169	116
February.....	195	170	115
March.....	196	170	115
April.....	196	170	115

<sup>1</sup> Ratio of prices received to prices paid, interest, and taxes.

<sup>2</sup> Revised.

85 percent of this was marketed, and 15 percent consumed at home. Gross income from chickens and broilers was around 1 billion dollars; from eggs, 1½ billion. Production estimates for 1943: 847 million farm chickens, 252 million commercial broilers, and 54 billion eggs.

Compared with 1942, gross income from chickens, broilers and eggs was up nearly one-half. Chicken production was up one-fifth; broiler production increased nearly a fourth, and egg production was nearly 12 percent higher. Feed and other costs were also higher than in 1942.

Although in 1943 farmers sold 41 percent more chickens and 15 percent more eggs than in 1942, they ate 1 percent fewer chickens and slightly fewer eggs in their own homes.

A substantial decline in chick hatchings is in prospect for the remainder of the hatching season, with many hatcheries scheduled to close May 15 if reported intentions are carried out. The output of chicks during April and May was indicated to be only about two-thirds of the output during

the corresponding period last year. If this decrease occurs, chick production during the first 5 months of 1944 would be 18 percent less than the record high total of 1,009,773,000 achieved in the same period last year, but 10 percent more than the corresponding period in 1941.

## TRUCK CROPS

**S**PRING truck crop tonnage this year will probably establish a new high record, despite the fact that unfavorable weather the first half of April reduced early prospects to some extent. On the basis of estimates made to May 1, covering all of the spring acreage an aggregate production of about 1,686,000 tons of spring truck crops will be produced. This would be 15 percent above 1943 spring production, 12 percent above the 1933-42 average, and 8 percent above the previous record set in the spring of 1938. Production of spring season truck crops in 1943 totaled 1,466,000 tons, and averaged 1,509,000 tons during the period 1933-42.

Compared with last spring, substantially larger supplies were indicated for spring eggplant, early spring onions, early spring tomatoes, spring green peppers, early spring lettuce, spring celery, and early spring cabbage. Moderate increases over last year were expected in spring shallots, spring cauliflower, early spring snap beans and spring spinach. Lighter supplies of early spring green peas, mid-spring snap beans and spring carrots were indicated, with the reduction in carrots being especially pronounced. Spring carrot production, however, is well above average.

Early estimates on the intended acreage of cabbage, onions, and watermelons for summer and fall harvest indicate substantial increases in the acreage of each of these crops. The indicated increase over last year for summer cabbage is 2 percent; for sum-

mer onions, 33 percent; for summer watermelons, 50 percent; for early fall Domestic type cabbage, 20 percent; and for early fall Danish (storage) type cabbage, 30 percent.

## FRUIT

**P**ROSPECTS for deciduous fruit and nut production in 1944 were generally favorable on May 1 in nearly all sections of the country. It was too early, however, for definite indications as to prospective production. Trees, vines, and buds in nearly all sections came through the winter in good condition. Peach production prospects in the Southeastern and South Central States were reduced materially by low temperatures early in April; nevertheless, for these areas as a whole an approximate average crop may still be expected.

Citrus groves were in good condition in all areas on May 1 and pros-

pects for the new citrus crops were good. The 1943-44 citrus production is turning out to be the largest on record. Orange production, including tangerines, is expected to total about 104 million boxes, and grapefruit about 53.1 million boxes, both record crops. Lemon production is indicated to be 12.8 million boxes compared with the crop of 14.9 million boxes last season.

Indications are that production of early- and mid-spring strawberries totaled 5,441,000 crates, approximately 23 percent less than in 1943 and about one-half the 10-year (1933-42) average. With a considerable reduction in acreage this year, higher yields per acre are in prospect than for 1943, due to favorable growing conditions. The estimated acreage of late spring strawberries is 14 percent below the 35,750 acres harvested last year.

Prices for most fresh fruits marketed during the spring were higher than similar prices a year earlier. The

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		April 1943	March 1944	April 1944	Parity price, April 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushels).....dollars..	0.884	0.837	1.223	1.46	1.47	1.60
Corn (bushel).....do.....	.642	.691	1.002	1.14	1.15	1.09
Oats (bushel).....do.....	.309	.340	.611	.793	.791	.678
Rice (bushel).....do.....	.813	.742	1.847	1.92	1.90	1.83
Cotton (pound).....cents..	12.4	10.29	20.13	19.97	20.21	21.08
Potatoes (bushel).....dollars..	.097	.717	1.671	1.37	1.37	1.22
Hay (ton).....do.....	11.87	8.87	12.61	16.00	16.20	20.20
Soybeans (bushel).....do.....	1.96	.954	1.67	1.89	1.91	1.83
Peanuts (pound).....cents..	4.8	3.55	6.93	7.52	7.63	8.16
Apples (bushel).....dollars..	.96	.90	2.15	3.07	3.17	1.63
Oranges, on tree, per box.....do.....	4.81	1.11	2.03	1.95	2.20	1.97
Hogs (hundredweight).....do.....	7.27	8.38	14.34	13.10	13.00	12.40
Beef cattle (hundredweight).....do.....	5.42	6.56	13.00	12.00	12.10	9.21
Veal calves (hundredweight).....do.....	6.75	7.80	14.22	13.30	13.20	11.60
Lambs (hundredweight).....do.....	5.88	7.79	13.87	13.40	13.60	10.00
Butterfat (pound).....cents..	28.3	29.1	51.3	51.1	50.7	44.3
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.05	3.27	3.21	2.55
Chickens (pound).....cents..	11.4	14.9	24.6	23.8	23.7	19.4
Eggs (dozen).....do.....	21.5	21.7	33.7	30.1	27.1	30.0
Wool (pound).....do.....	18.3	23.8	42.1	39.0	39.7	31.1
Tobacco:						
Fire-cured types 21-24 (pound).....do.....	13.6	-----	14.9	21.0	20.7	14.8

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy feed payments since February 1944.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

<sup>8</sup> Base price crop years 1919-23.

strong market position of fresh fruit is expected to continue, with prices for individual fruits at or near ceilings where maximum price regulations are in force.

## TOBACCO

**T**HE LARGEST tobacco acreage since 1939, and one of the largest on record, is expected this season. Growers' March 1 intentions were to plant 1,715,600 acres. If planted, this acreage will be exceeded only by the 1,999,900 acres in 1939. If the announced plantings materialize, and the 5-year (1938-42) average yield by States and types, are raised, 1944 production will be 18 percent higher than the 1942 crop.

Growers plan to increase flue-cured acreage 18 percent, from 846,400 acres in 1943 to 996,300 in 1944. If the production rate should match the 1938-42 yield, this acreage will produce 946 million pounds of tobacco, a crop 20 percent larger than last year's, and second only to the 1939 record crop.

March intentions for burley tobacco point to an acreage 21 percent higher than last year's harvested acreage, or 478,000 acres. On the basis of the 5-year (1938-42) average yield, this would produce a 456-million-pound crop, 18 percent more than last year's crop, and approximately 7 percent above the previous record crop of 424.7 million pounds raised in 1931. Indications were that Maryland tobacco plantings would be 15 percent higher than last year's, and that there would be an increase of 4 percent in dark-fired and 32 percent in dark air-cured. In the case of cigar tobaccos, increases of 12 percent for wrappers and 8 percent for binders appeared likely, with a probable decrease of 3 percent for filler types.

Domestic cigarette consumption of 257 billion during the 1943 calendar year was an all-time record. During the first 7 months of the current fiscal year, approximately 159.8 billion tax-

paid cigarettes were withdrawn, as compared with 147.2 billion withdrawn during the same period a year earlier.

Last year's cigar consumption was below 1942, with tax-paid withdrawals of all classes during the calendar year 1943 totaling 5.2 billion, 16 percent less than the 6.2 billion withdrawn during 1942.

Prices received by growers for all major types of the 1943 crop of tobacco were well above those paid for the 1942 crop. Higher prices were particularly pronounced for dark tobaccos, although substantial advances occurred for burley and for some types of flue-cured and cigar tobaccos. For the 1943 crop of flue-cured, estimated at about 791 million pounds, an average of almost 40 cents per pound was paid, the highest price since 1919, when growers received 44.4 cents per pound.

Gross marketings for the 1943 crop of burley totaled 395.4 million pounds at an average of 45.5 cents per pound—the highest average price on record.

## COTTON

**C**OTTON consumption during the first 8 months of the current season was at an annual rate of 10.1 million bales. This compares with an annual rate of 11.3 million bales during the corresponding months last season and a total consumption in 1942-43 of 11.1 million bales.

This decline in cotton consumption was influenced by the tight labor situation rather than by any decline in demand for cotton textiles. The labor difficulty is caused by (1) high turnover rate among textile workers, (2) decrease in worker efficiency because of the necessity for hiring a greater number of inexperienced workers, and (3) fewer employees in the industry (a decline of 10 percent in little more than a year).

Recent Government actions designed to increase mill consumption include: (1) recent increases in ceiling prices for certain classes of cotton

textiles, (2) the amendment to Limitation Order L-99 to provide for production of cotton yarn at least up to the maximum 1943 quarterly level, and (3) the War Manpower Commission order stipulating a 48-hour week in the cotton textile industry.

Cotton prices during the first quarter of 1944 ranged from 19.83 to 21.28 cents for Middling  $1\frac{1}{8}$  inch, as compared with the average of 20.77 during the corresponding period last season. For some months cotton prices have reacted to peace rumors by weakening, and have strengthened on news of a long war. However, in addition to war developments, crop prospects are also an important force at this time of the year, and it remains to be seen what the effect will be of widespread delay in plantings due to heavy rains, as well as labor scarcity and increased wage rates.

## CORN STOCKS

**M**ANY processors manufacturing corn products for use by essential war industries had, by the middle of April, been unable to obtain enough corn to process from commercial stocks. During April the wet-processing plants were operating on limited schedules even though they use a comparatively small amount of corn, about  $2\frac{1}{2}$  million bushels a week, at peak production—to come from last year's record crop of over 3 billion bushels.

To help the corn processors, the War Food Administration, through the Commodity Credit Corporation, recently began buying corn from farmers in five corn-belt States. CCC purchases shelled corn delivered to local elevators and pays the farmers the cost of shelling and hauling. By the end of April more than 20 million bushels were promised for sale by farmers under the CCC purchase program.

This program became necessary because local elevators did not have sufficient supplies to meet war needs

even though WFA had required them on April 1 to increase from 35 to 60 percent the amount set aside for sale to designated processors.

In addition to its uses as livestock feed and human food, corn is processed for use in the making of many vital war products such as explosives, textiles, pharmaceuticals, rubber, asbestos, copper, aluminum, bronze, magnesium, and steel.

## COLD STORAGE

**C**OLD STORAGE space, particularly in freezers, was severely strained during the past winter and early spring, largely a result of last year's phenomenal production of so many commodities requiring freezing. On April 1 this year freezers were 87 percent occupied as compared with 58 percent on April 1, 1940, and coolers were 79 percent occupied on that date compared with 38 percent April 1, 1940.

Despite heavy out-of-storage movements of frozen fruits and vegetables, creamery butter, frozen poultry, and frozen meats toward the end of the first quarter of 1944, stocks of these items on April 1 were still considerably greater than a year earlier.

On April 1 frozen fruit holdings were 30 percent more than a year earlier, frozen vegetables 84 percent more, frozen eggs 50 percent more, frozen poultry nearly 100 percent more, and creamery butter nearly 5 times more. The out-of-storage movement of frozen meats was not as great as normal, and the accumulation of lard stocks was substantially larger than normal.

Generally, cold storage stocks are nearly depleted before new production goes into storage. However, larger production, plus the fact that large commercial producers and users of food have tended to store supplies in excess of normal requirements, has resulted in crowding refrigeration facilities to the point where commodities had to be moved out quickly to make



room for incoming 1944 production—principally dairy and poultry products.

Acting toward this end, the War Food Administration has ordered prompt movement of certain foods from cold storage.

## FARM LABOR

**T**HE general level of farm wage rates was at a record high in April, 17 points higher than on January 1 this year and 53 points higher than on the first of April a year ago. The index was 292 percent of the 1910-14 average compared with an index of 239 on April 1 last year.

Sharp increases in farm wage rates over April 1943 were reported in all parts of the country. The increase in average rates per month with board varied from 16 percent in the East North Central Region to 26 percent in the West South Central States. New England, with a 13 percent increase over April 1943, saw the smallest

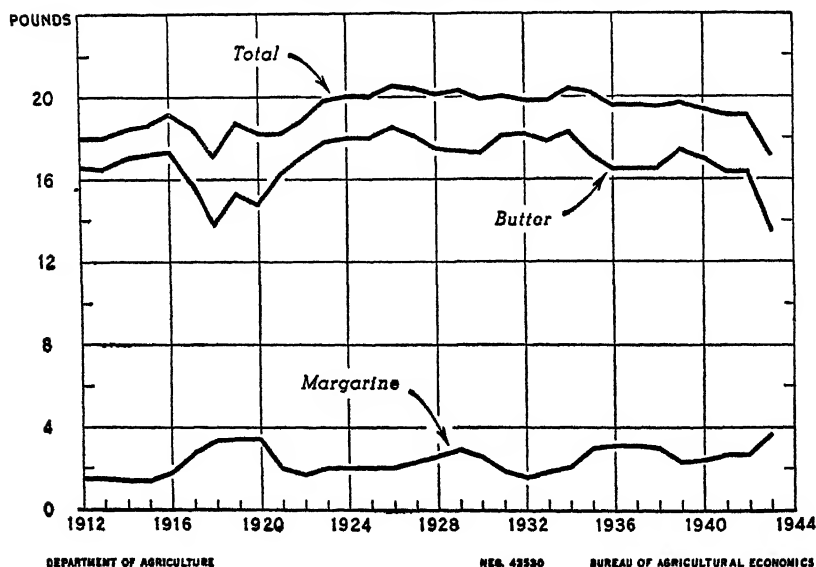
gain in daily rates without board, while the West South Central Region had the largest, 28 percent.

While the April 1 number of unpaid family workers—7,401,000—was virtually the same as a year ago, the number of hired workers declined 10 percent from last year's total—1,679,000 compared with 1,875,000. The decline in the number of hired farm workers was general in all parts of the country except the Pacific Region, where no change was noted.

Specific Wage Ceiling Regulation No. 3, announced April 19 by the War Food Administration, established maximum wage rates for workers engaged in picking early potatoes in the San Joaquin and Cuyama Valleys of California.

The piece-work rate established was 12 cents per hundred pounds, net weight, and the hourly rate, 70 cents per hour. These are approximately the peak rates for this work reached at the end of last season in these valleys.

## BUTTER AND MARGARINE: APPARENT DOMESTIC DISAPPEARANCE (CIVILIAN AND MILITARY) PER CAPITA, UNITED STATES, 1912-43



# Poultry Industry Changes

**I**MPORTANT changes in the poultry industry during the past decade—perhaps more significant than in any other livestock enterprise—have been accelerated during the war. Greatly expanded and intensified demand together with many innovations in distribution methods have stimulated these changes. Because of their high nutrient value, dried eggs account for a sizable share of the food supplied our armed forces and lend-leased to our Allies. Shortages in red meats and other competing products have resulted in a civilian poultry and egg demand far greater than would normally be the case with prevailing incomes. About 30 percent more eggs were produced in 1943 than in 1941, illustrating how readily egg production responds to changes in demand.

Probably the most important change in the poultry industry is the almost phenomenal increase in rate of lay per bird during the past decade. Improved feeding and breeding methods have been largely responsible for this.

## Increased Specialization

For the most part these changes have been in the direction of increased specialization and improved techniques for each specialized function. Some of the developments have been retarded during the war but many have been accelerated. All will continue in the years ahead.

While the rate of lay per bird has been increasing steadily for several years there is still considerable chance for further increases. Requirements of feed for maintenance of laying birds is about constant regardless of the rate of production. Hence, the amount of feed required to produce a dozen eggs decreases as the rate of production increases. A Leghorn producing 80 eggs per year requires about 10 pounds of concentrates per dozen eggs produced, while a bird that lays 160 eggs requires about 5.5 pounds per dozen.

Farmers in many parts of the nation have greatly improved their poultry husbandry practices in the last few years. Improvement has been particularly marked in the Midwest and in the South; the national average level of performance by poultrymen apparently has increased considerably more than on specialized egg-producing farms where a relatively high degree of efficiency had been achieved many years ago. Competitive relationships among egg producing regions probably will change at an accelerated rate because of variations among regions in the rate of improvements.

## Less Meat Per Egg Output

The increased rate of egg production per layer, besides raising the level of efficiency of production in terms of feed concentrates used per dozen eggs produced, has resulted in relatively less chicken meat from farm laying flocks in proportion to the volume of eggs produced. The fairly general farm practice of purchasing sexed day-old pullets (instead of straight-run chicks) has contributed to the decline in chicken meat production on farms relative to egg production. For every dozen eggs produced on farms in 1939-43 there was produced 0.59 pound of chicken (dressed weight, slaughtered) compared with 0.70 pound in 1925-29 and 0.74 pound in 1910-14.

Prevailing consumer demand for poultry meat has been met, insofar as feed supplies and prices have permitted, by increased production of both commercial broilers (specialized production of chicken for meat) and turkeys. The slaughter of commercial broilers in 1943 was 700 percent greater than the slaughter 10 years earlier while the slaughter of turkey was 64 percent larger. The slaughter of farm chickens was only 38 percent greater in 1943 than in 1934, but total slaughter of chicken was 60 percent greater.

Broiler production has increased steadily each year from 1934 through 1943—the period for which records are available. In general, specialized production of chicken for meat of the kind typified by commercial broilers has thus far expanded the most near large consuming centers or in sections having a relatively large amount of incompletely utilized agricultural labor.

Increased specialization within the turkey industry in the last decade has arisen following the separation of the function of producing hatching eggs from the actual raising of market turkeys. For several years the shift in farmers' practices (actual and intended) from producing their own hatching eggs to buying eggs or poults outstripped the specialized production of eggs and poults. This tended to limit any further expansion in total turkey production. These relationships promise to be better balanced in the near future.

### **Larger Dried Egg Production**

An outstanding feature in the distribution phase of the poultry and egg industry has been the phenomenal wartime increase in dried egg production. The output of dried egg in 1943 totaled 262 million pounds in contrast to the pre-war annual average of less than 10 million pounds. Dried egg was well adapted to lend-lease purposes because little shipping space was required for the amount of food nutrients contained and because it was possible to readily increase farm production of eggs. For the military the only feasible means of shipping the nutrients from eggs to the many distant outposts was in dried form. Dried egg, properly prepared, has been a highly satisfactory substitute for fresh shell eggs for several uses.

Dried egg production, no doubt, will decline sharply after the present emergency. The most promising opportunity for expanded use of dried egg appears to lie in the manufacture

of prepared flour and other mixtures and as an ingredient in the preparation of food in both homes and institutions.

Any price advantage that would have been gained several years ago by drying eggs in the flush season for sale in the fall and winter of seasonally low production has become considerably smaller because the seasonal swing from low to high production and prices has become much smaller. Corresponding with the relative increase in egg production in the fall and winter the nation has become less dependent on storage shell eggs in that season.

Future prospects for the dried egg industry differ greatly from prospects for the dried milk industry. An egg is in a "container" when produced, whereas milk requires varying degrees of processing. In the past, except for hatching eggs, practically all the eggs that have been produced have been consumed while many billions of pounds of skim milk have been used for animal feed and in many cases inefficiently for that purpose. Hence, increased production of dried egg for domestic consumption would largely mean a food shift from one form to another. Increased production of dried milk for consumption in this country, on the other hand, would mean, in large part, a net addition to the total human consumption of dairy products.

### **More Frozen Poultry**

The quantity of poultry sold to consumers fully drawn and frozen has increased greatly in the last few years. Customarily, in the past, poultry has been referred to as dressed after only the blood and feathers have been removed. Birds dressed to this stage have been stored for long periods and transported great distances and then the birds have been fully drawn—all inedible portion removed, except bones—in the retail store or in the home of the consumer using the bird.

Improvement in quick-freezing processes has been a factor accounting

for increased processing of fully drawn and frozen birds. This will tend to increase more with any further expansion in the frozen food industry.

Along with the changes in the preparation of dressed poultry is the improved quality of birds delivered by farmers to dressing plants, a result of better feeding and management. Packers and dressers are thus finding it relatively less profitable than formerly to feed poultry in their feeding rooms.

Use of Government grading standards for eggs and poultry has increased greatly during the war emergency. This has been due in part to Federal purchases and setting price ceilings in terms of such grades. But the mere fact that many dealers and processors, for the first time, have experienced benefits derived from uniform grading standards will encourage increased use of grades in the years ahead.

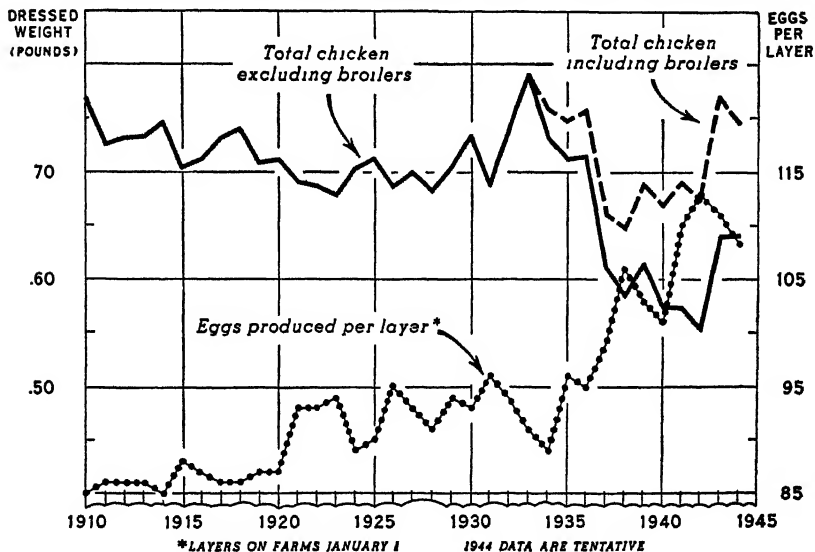
Production of eggs has increased more sharply than has production of poultry meat compared with the pre-war level. Total production of eggs in 1944 will be equivalent to about 440 eggs per person. If requirements for

hatching and foreign trade in 1944 were equal only to that normally to be expected in a prosperous year, the per capita supply of eggs for consumption in 1944 would be about 425 eggs.

To supply the 1944 total population with the 1942-43 average per capita consumption of eggs, however, would require only between 75 and 80 percent of the prospective 1944 egg supply per citizen—military and civilian. This is indicative of the direction but, of course, only roughly indicative of the amount of adjustment that will occur in the years ahead, compared with the 1944 egg output. Further increases in the rate of egg production per bird will mean that numbers of layers will decline proportionately more than egg production. Hence a relatively much greater proportion of the total consumer demand for poultry will be met by turkeys and by chickens produced under specialized conditions.

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Bureau of Agricultural Economics

**POUNDS OF CHICKEN SLAUGHTERED PER DOZEN EGGS PRODUCED,  
AND EGG PRODUCTION PER LAYER, UNITED STATES, 1910-44**



# Science Remodels Sheep

ONE kind of remodeling—the kind dealing with living animals—need not wait for priorities on building material. The material is already at hand. Skillful breeders handle it with the master touch; others obtain the desired results only with some guidance. Acting as pattern makers for improved types of animals, scientists of the Department of Agriculture have cooperated with State specialists and breeders in this field of modernization. The underlying purpose is to develop animals well adapted to the rapid pace of modern production by combining a maximum of desired characteristics.

By analyzing the breeding and production records of 1,622 ewes and their yearling daughters, scientists of the Bureau of Animal Industry in the Agricultural Research Administration estimated the extent to which fleece and body characteristics are inherited. The approximate degrees of heritability are: body weight, 40 percent; folds on the neck, 26 percent; length of staple (unstretched wool fibers), 36 percent; covering of wool on the face, 32 percent; weight of clean fleece, 38 percent; body type, 12 percent. These figures indicate that considerable progress in sheep improvement may be expected through selection for these characteristics.

## Present Flocks of Mixed Breeds

Present range flocks of the West are composed principally of sheep that are intermixtures of several breeds, notably Ramboullers, Lincolns, and Cotswolds. As a result, most flocks of range sheep vary in body type and fleece characteristics which complicate both production and marketing problems.

In studies of the most desirable types of sheep for the western ranges, the animal scientists observed, among other things, great variation in the quantities of wool on the face and legs,

and also in the prevalence of skin folds, especially about the neck and shoulders.

Contrary to former belief that an abundance of wool on the face and legs and a wrinkled skin all helped to make a heavier and more valuable fleece, actual tests, combined with marketing data, showed the opposite to be usually the case. Wool on the face and legs was so often short, stained, and dirty it was a liability rather than an asset.

Moreover, a heavy face covering created a so-called wool-blind condition; unless the wool was kept clipped from around the eyes, the sheep had difficulty in finding feed. Besides, wool-blind animals were more apt to be lost from the flock. Experience showed that some died from lowered resistance brought on by undernourishment and others fell victims to predatory animals. Tests also showed that, notwithstanding its larger area, a wrinkled skin produced no greater value of wool than a smooth skin. Sheep with large skin folds were also more difficult to shear than smooth-skinned animals.

## Opened Faced Ewes Better

So scientists set to work to remodel, virtually from head to foot, the sheep of flocks selected for experimentation at the Western Sheep Breeding Laboratory at Dubois, Idaho. As "building" material they selected breeding animals with smooth bodies, open faces, and other desirable characteristics such as vigor and prolificacy. This work has gone on for several years. Among the results obtained, ewes with open faces have produced and raised to weaning 12 percent more lambs than ewes with covered faces. The advantage in lamb production was 8.6 pounds per ewe per year, again in favor of the open-faced ewes.

As yearlings, ewes with open faces have weighed, on an average, about 5 pounds more than those with a heavy face covering. These benefits ap-

peared to establish beyond doubt the economic evils, in sheep husbandry as elsewhere, of having wool pulled over the eyes.

Subsequent selection of breeding stock for open faces gave a greater proportion of offspring free from wool blindness. As a result of 1 year's breeding, the proportion of lambs with open faces at weaning time increased from 11 to 17 percent. Similarly the proportion of weanling lambs free from skinfolds increased from 72 to 84 percent. These findings are now being disseminated widely to range sheepmen.

### Two Range Types Taylor-Made

Meanwhile, in addition to this beneficial modernizing trend, specialists of the Bureau of Animal Industry have been developing two new types of improved range sheep, almost literally built to order. One is called the Columbia, and many western sheepmen already are enthusiastic about it. It is the result of efforts to develop a crossbred sheep that will breed true to type and that is adapted to western range areas, especially where there is an abundance of feed. The foundation breeding animals were principally selected Lincoln rams and Rambouillet ewes. Columbia sheep are large, vigorous, polled (without horns), and free from wool blindness and body wrinkles. The body is especially well fleshed in the loin, has well-developed forequarters—indicating a strong constitution—and a good leg of mutton. Mature ewes produce about 12 pounds of unscoured wool a year, as compared with about 8 pounds for average sheep. The fleece of the new animal has the desirable quality of staying well together in storms. Columbia lambs grow rapidly and mature at an early age under good range conditions. Without receiving grain they average 80 pounds in weight at an age of about 130 days.

The other new range sheep is the Targhee, which derives its name from the Targhee National Forest west of

Yellowstone Park. The Targhee is a medium-sized sheep produced by mating carefully selected animals of Rambouillet, Corriedale, and Lincoln breeding, with subsequent interbreeding of selected offspring. The inheritance of the Targhee is three-fourths of fine-wool sheep and one fourth of long-wool sheep. This sheep is a resourceful grazing animal, able to subsist on medium-sparse ranges. The Targhee is highly adapted to a large area of the West. Its wool is finer than that of the Columbia but not so fine as the Rambouillet's. Targhee ewes are good mothers. They raise lambs that average about 80 pounds in weight at 140 days of age, on good range without grain.

### Smaller Type Designed for East

As a service to eastern sheepmen, Department scientists are developing a still smaller type of sheep designed particularly for New England farm conditions. The chief object is to combine the good meat qualities of the Southdown and the wool qualities of the Corriedale. Efficiency in the use of feed and pasture is likewise sought. This work is in progress on the Department's farm near Middlebury, Vermont. The results have been encouraging and the investigators have already selected a name for the prospective breed—the Southdale.

Since this new model of sheep is small to medium in size, the legs of lamb and other cuts are of the relatively small size so much desired by many city consumers. The fleeces of mature ewes average about 7 pounds of attractive, light-shrinking, moderately fine wool of medium grade.

One of the novelties in scientific breeding, which also has a practical aspect, is the development and multiplication of multi-nippled sheep—those with four or more nipples per ewe as compared with the normal number, two. A flock of 65 sheep having this character fairly well established was acquired in 1941. These animals were descendants of an original flock devel-

oped by Alexander Graham Bell, of telephone fame, who was interested in increasing the number of lambs per ewe and breeding into the flock the necessary number of nipples and sufficient milk flow for raising the extra lambs. The scientific studies now in progress deal with fixing, genetically, the multiple-birth and multi-nippled characteristics, with the view of increasing the production, per ewe, of both lamb meat and wool.

Still another field of study has been the improvement of Navajo sheep at the Department's Southwestern Range and Sheep Breeding Laboratory at Fort Wingate, N. Mex. Here the problems encountered are an outgrowth of the cultural habits and traditions of the people—now numbering about 50,000 Navajo Indians on a reservation of nearly 16 million acres. Their way of life is seminomadic and their economic welfare depends to a material degree on supplies of the proper type of wool for weaving into rugs and blankets.

The small yields of wool by old-type Navajo sheep—1 to 2 pounds per animal—led their owners to try cross-breeding with Rambouillet and other rams, but the resulting offspring proved to be poorly adapted to the adverse range conditions, and their wool was not of the type desired for handicraft weaving. In cooperation with the Bureau of Indian Affairs of the Department of the Interior, scientists of the Department of Agriculture now seek to synthesize a new strain of Navajo sheep that can live on the desert ranges and that produce, in addition to mutton and lamb, weaving wool suitable for the native handicrafts. Progress to date has been encouraging, with prospects that the remodeling of Navajo sheep will increase the economic security of their Indian owners and at the same time preserve the distinctive Navajo art of weaving.

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## Air Transport of Perishable Foods

THE war-accelerated use of the airplane as a freight carrier points to a large-scale future movement of many civilian goods. Commodities most adaptable to air transport are those whose value will be increased by high speed transportation or special care in handling. Certain fruits and vegetables are in this class.

Air transportation of fruits and vegetables are important to producers and air lines because these commodities would be potential West-to-East and South-to-North cargo to balance the opposite flow of industrial products to the South and West from the Northeast.

A recent study<sup>1</sup> of the potential air cargo traffic of fresh fruit and vegetables at various assumed rates shows

<sup>1</sup> *Air Cargo Potential in Fresh Fruits and Vegetables* by Spencer A. Larson, Wayne University, Detroit, Mich., 1944.

what kinds of fruits and vegetables would move by air freight in a volume of over 1 million ton-miles at various ton-mile rates. It is estimated that for fruits, at a 15-cent rate some strawberries will move, at a 10-cent rate strawberries and peaches will move, at 7 cents strawberries, grapes, peaches, cantaloupes, cherries, pineapples, plums, prunes, raspberries, and avocados will move in volume. For vegetables, at a 15-cent rate some tomatoes will move, at 10 cents tomatoes and beans will move, at 7 cents tomatoes, lettuce, asparagus, beans, cabbage, peas, spinach, corn, cucumbers, and endive will move in volume. At 5-cent and 3-cent rates the variety is further expanded.

In arriving at the potential air traffic of perishables principal emphasis was given to the quality pre-

miam which the air-borne fruits and vegetables were expected to command in the market. Little or no consideration was given to possible economies in distribution such as a decrease in spoilage, substitution of lighter containers, labor savings, elimination of ripening costs for tomatoes, and elimination of artificial refrigeration costs while in transit. To the extent that these economies decrease and offset the difference between air transportation and surface transportation costs the air freight potential is increased.

### Hypothetical Operation

To illustrate how air freight of perishable foods might work out, a hypothetical operation was assumed,<sup>2</sup> predicated on the use of present known equipment as soon as it becomes available for commercial use. The air transportation of strawberries and tomatoes from Florida to Detroit was used as an example.

The analysis establishes under certain assumptions the air transport costs of strawberries and tomatoes from their respective production areas in the vicinity of Lakeland and Miami, Florida, to Detroit, Mich., shortly after the end of the war. The analysis includes the estimated charges for trucking from the production center to the airport, loading the airplane, the airplane flight from airport of origin to airport of destination, unloading the airplane, trucking the cargo to the produce terminal in the city of Detroit, and unloading the produce at this terminal. The type of airplane used in this analysis is the C-47 Transport, the military equivalent of the Douglas DC-3 widely used by the commercial airlines before the war.

The total transportation and handling charge arrived at was 11.3 cents per quart of strawberries from the Lakeland producing area to Detroit

and 8 cents per pound of tomatoes from the Miami producing area to Detroit. Air transportation charges for strawberries are about 6.5 cents per quart higher than rail or truck shipments, and 6 cents per quart higher than rail express, while air charges for tomatoes are approximately 6 cents higher per pound than by other means.

In computing the transportation charges by the various methods of transportation, standard wooden containers were assumed in every instance. In all cases except air, wooden containers have been more or less a necessity in order to protect the product while in transit. Since ice refrigeration will not be necessary and since the air-borne cargo will receive very gentle handling compared to the handling of produce transported by surface carriers, paper containers might be used in place of the heavier wooden containers. This would have two effects: (1) a decrease in weight of the container would lower the cost of transportation per unit, and (2) the packaging of the product at the producing area into consumer-sized packages would tend to lower handling costs.

### Lighter Containers

Paper containers have already been developed for both strawberries and tomatoes. The approximate weight of the large paper containers for strawberries is 7 pounds each compared with 10 pounds for the wooden container now in use. The approximate weight of the large paper containers for tomatoes is 2 pounds each compared with 5 pounds for the 30-pound lug box now in use. By using paper containers instead of wood the cost per quart of strawberries by air transportation is about 5½ cents higher than by rail or truck and 5 cents higher than by rail express, while the cost per pound of tomatoes is approximately 5 cents higher.

As now handled, most fresh tomatoes sold at retail during the winter

<sup>2</sup> "Post-War Possibilities of Air Transportation of Fresh Strawberries and Tomatoes," in *The Marketing and Transportation Situation*, March 1944, Bureau of Agricultural Economics, Washington, D. C.



months are picked in the field green. If the tomatoes are picked at the correct stage of maturity, they may be picked green and if handled properly will turn red and acquire a degree of palatability. However, under actual conditions green tomatoes are often not picked with the correct amount of maturity thereby causing many of the immature tomatoes to ripen very unsatisfactorily. After the tomatoes are picked green they are wrapped and shipped to ripening plants in the large northeastern consuming centers. In the ripening plants they are unwrapped, sorted, put into ripening rooms with controlled temperatures and after ripening, resorted and repacked for sale by retail stores.

### **Less Waste and Handling Costs**

The advantages to be gained by packing the tomatoes directly into consumer packages in the producing area are a reduction in the cost of labor, and in the spoilage and waste which occur in the retail stores. These two factors would tend to further decrease the net difference in transportation costs between surface-transported and air-transported tomatoes.

Ripening costs vary from one market and one ripening room to another. Information obtained from the trade and from a study of tomato prices on the Chicago market indicates that the wholesale price of ripened tomatoes is about \$3 per 100 pounds more than green tomatoes. If the tomatoes were transported by air practically all of this difference could be eliminated as the tomatoes could be picked vine-ripened, sorted, and packed directly into consumer-size paper cartons. Thus the net difference between surface-transported and air-transported tomatoes in paper cartons at the retail level may be decreased an additional 3 cents per pound.

After balancing the savings to be gained by air transportation of tomatoes against the additional cost of this method of transportation they are about equal. This study indicates

that, using existing equipment and with approximately the present costs, air-transported tomatoes can be placed on retail counters at approximately the same price as those transported by surface carriers.

The principal advantage to be gained by air freight through faster and more gentle transportation is in the maintenance of the quality of the product. To bring strawberries from Florida to Detroit by rail express requires a minimum of 3 days and by rail freight and truck a minimum of 4 days. Tomatoes take slightly longer. By air the time required is between 6½ and 7½ hours. Produce may be harvested during the forenoon of one day, pre-cooled in the afternoon, loaded on the plane in the evening, transported overnight to the northern consuming center and placed in the retail store the day after harvesting. This makes it possible to harvest produce in a much more advanced stage of natural ripening with, in most cases, a considerable increase in palatability and vitamin content, and some increase in yield per acre.

### **Retail Price Not Much Higher**

It remains to be established, by further study and the actual stocking of the produce in stores, whether the quality will be sufficiently improved to sell at a price high enough to pay for any difference in transportation costs. When the net difference between air-transported and surface-transported costs is added to the retail price of strawberries, the additional cost does not represent a substantially higher price to the housewife. If the cost of strawberries were not increased over 5 cents per quart and tomatoes not over 1 or 2 cents per pound and if the improvement in quality were as great as expected, it is quite probable that large quantities would be sold.

The period December through May in 1942-43 was fairly typical of the quantity of strawberries and tomatoes shipped by rail to Detroit in carload

lots. During this period a total of 7,988 tons of strawberries were shipped by rail—the equivalent of about 6,165,000 air ton-miles—with over half from Florida and Louisiana, both over 1,000 miles distant. Likewise, over 12 thousand tons of tomatoes were shipped to Detroit by rail—representing about 13,670,000 air ton-miles—with over 12 million air ton-miles originating in Florida, Texas, and California. While the more distantly produced berries and tomatoes would be the best candidates for air transportation, all of them represent potential traffic.

Present information indicates that a

substantial portion of the strawberries now sold during the winter and spring months in Detroit and other Northern cities may move by air. It also indicates that almost all or even substantially more than the tomatoes now moving may be carried by air. If one-half of the strawberries and all of the tomatoes now moving over 1,000 miles to Detroit were moved by air, it would mean 2,537 DC-3 plane loads, or during the 6 months' period an average of 14 DC-3 plane loads per day.

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## Pyrethrum and Rotenone for the Americas

**E**XTENSIVE and intensive cropping of the land which has concentrated the host plants of insect pests, widespread movement of crops and livestock in interstate and foreign commerce which has spread insect pests into larger areas, and increased demand for better quality products have all made the use of insecticides as important a farm operation throughout the United States as plowing and cultivating. This was not generally true before the turn of the century.

Widespread use of pyrethrum and rotenone as an insecticide in agriculture has developed only since about 1930 although pyrethrum has been used in the household for many years.

Pyrethrum and rotenone insecticides, while being toxic to insects and cold-blood animals, have no known harmful effects on warm-blooded animals. They are obtained from plants. Pyrethrum comes from the flower head—referred to commercially as pyrethrum flowers—of a cousin to the ordinary garden chrysanthemum, now grown in large quantities in Africa and Brazil and being introduced quite extensively elsewhere in Latin America. Rotenone comes chiefly from the roots of two plants,

derris and lonchocarpus. Derris, a native of the far East, is now being planted in Central and South America, while lonchocarpus, the roots usually being referred to as *culé* in the trade, is a native of the Amazon basin and other tropical areas in South America.

The United States imports all rotenone-bearing roots as well as virtually all pyrethrum flowers—a small quantity of the latter are produced in this country for experimental purposes. The accompanying table indicates the increased use of these insecticides during the 5 years previ-

United States Imports of Pyrethrum and Rotenone Materials, for Selected Periods<sup>1</sup>

	1935	5-yr. aver- age 1935-39	1940
Pyrethrum: Pyrethrum flowers...	1,000 pounds 15, 571	1,000 pounds 14, 734	1,000 pounds 12, 595
Rotenone: Derris root	200		3, 221
Cubé.	None	1, 534	3, 246
Total rotenone...	200	2, 477	6, 572
Total pyrethrum and rotenone...	15, 771	17, 211	19, 156

<sup>1</sup> Compiled from reports of U. S. Department of Commerce.

ous to United States entry into the war.

### War Speeded Production Shifts

The war accelerated the marked shifts in sources of pyrethrum and rotenone materials that had been underway before Japan's conquest of the Pacific and Far East. In 1935 over 97 percent of our imports of pyrethrum flowers came from Japan, less than 2 percent from Europe, and the remainder from Africa. By 1940 Japan was supplying only about 16 percent, Europe and South America less than 1 percent each, while African supplies had increased to about 83 percent.

In 1935 the entire United States supply of derris root came from British Malaya. By 1940 British Malayan supplies were about 57 percent, while the Netherlands East Indies supplied 31 percent and the Philippines, French Indo-China, and British East Africa the remaining 12 percent.

The United States imported no cubé in 1935, although it had been used by South American Indians for centuries as a fish poison. Our first imports, about a half million pounds, came from Brazil in 1936. By 1940, however, Peru was supplying about 83 percent, Brazil about 14 percent, and Venezuela the remaining 3 percent.

Following 1940, imports of pyrethrum flowers decreased slightly, while some stockpiling of rotenone-bearing roots occurred as the international situation became more tense. The whole situation was changed with Japan's attack in the Pacific. The source of about 16 percent of pyrethrum imports at once disappeared; practically all areas supplying derris root were menaced, and the demand placed on shipping for war purposes made the movement of all insecticidal materials most difficult. As the British and Dutch possessions in the Far East were overrun by the Japanese, the original sources of derris root were completely cut off. Cubé was wholly

of Western Hemisphere origin and supplies from this source were available, but scarcity of ship bottoms materially slowed movement.

When the Far Eastern source of derris root was cut off, the only appreciable supply of available planting stock of this plant was at the Federal Experiment Station at Mayaguez, P. R. The Station immediately stepped up the production of cuttings which were distributed to producers on the recommendation of the Office of Foreign Agricultural Relations and to growers having contracts with the Foreign Economic Administration. By December 1943, there were approximately 2 million rooted derris plants in tropical America, all stemming from this source. This is sufficient to plant about 350 acres. A conservative estimate of yield is 1,000 pounds of air dried roots per acre, and from 18 to 24 months are required to produce a crop.

### U. S. Plant Expert in Brazil

An insecticidal plant specialist of the Department of Agriculture has collaborated with the Brazilian authorities in the selection of high-yielding strains of *lonchocarpus* (from which cubé comes), the establishment of a reproduction nursery, and the expansion of commercial plantings. The same party made extensive explorations of the upper Amazon basin, selecting several hundred of the more promising *lonchocarpus* plants of the area for propagation in and distribution from a nursery established in Peru. In cooperation with the Government of Ecuador our Department of Agriculture has collected several thousand cuttings of *lonchocarpus* from eastern Ecuador and also in the Amazon basin, which are being propagated for testing, selection, and distribution at a Cooperative Agricultural Experiment Station near Quevedo, Ecuador.

By December 1943, the plantation acreage of *lonchocarpus* in Brazil and Peru was estimated at 7,750 acres, with

additional plantings being made, especially in Peru. A conservative estimate of yield for *Lonchocarpus* is 2,000 pounds of air dried roots per acre and from 30 to 36 months are required from planting to produce a harvest. In addition to plantation production, large quantities of *lonchocarpus* roots are obtained from wild and semi-wild plants in Brazil, Peru, Colombia, Venezuela, and Ecuador.

The pyrethrum situation did not become acute immediately following Japanese hostilities, and, for a time, the belief was that needs for this insecticide could be met by the growing industry in Africa. But because of the nature of use of pyrethrum and the fortunes of war, it became evident in 1943 that an increase of production of this plant in the Americas would be desirable. Pyrethrum is a temperate zone plant, but because of the amount of hand labor required in its harvest, it is not well suited to domestic agriculture. A study was therefore made by a specialist of the Department of Agriculture of areas in Peru and Ecuador suitable for the introduction of the crop. Much of the cultivated land of these countries is sufficiently high above sea level to provide a temperate climate. Seeds were supplied for test plantings at cooperative experiment stations and by private growers under station supervision. The program is being intensified by a man highly trained in the production and preparation of pyrethrum flowers.

#### **All Pyrethrum to Army**

For the immediate future, the armed forces will require practically the entire supply of pyrethrum. There is insufficient knowledge of the future trend of events to formulate a long-time opinion regarding the production of pyrethrum flowers in the Americas. Climate and soil are suitable, but whether or not hostilities will continue until an industry becomes securely established in Latin America is problematical.

Stocks of Latin American rotenone-bearing roots in United States processors' hands were somewhat depleted at the beginning of 1944, but imports are expected to be from 30 to 40 percent greater than last year. It is believed that the supply of insecticides available to users will be at least as large and probably a little larger than the supply in 1943. This will come primarily from cubé, but small quantities of derris roots will be harvested this year.

For the long-time view, at the present rate and trend of planting, there will be an acreage of derris and *lonchocarpus* planted in 1946 sufficiently large to yield, when mature, about 22 million pounds of dry roots. Roots obtained from wild plants would be in addition. Post-war normal consumption has been variously estimated at from 20 to 40 million pounds annually if available. The rate of expansion of *lonchocarpus* plantings is decreasing slightly in Brazil and Peru where the growers have a fair idea of production costs and are thinking of future markets. Plantings of derris in Central America and Ecuador are so recent little is known about the costs of either growing or harvesting. Marked shifts in acreage and production may be expected when costs become better known even if prices remain at the present relatively high level. When prices are again subject to the influences of supply and demand, production in the Americas may be expected to fluctuate, but it is certain that the United States need never again be dependent on the Far East for its rotenone insecticides.

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## **INSECTICIDE AND FUNGICIDE OUTLOOK**

**T**HE SUPPLY outlook for agricultural spray and dust materials in 1944 is in some respects improved over 1943. On the other hand, a few

important insecticides and fungicides in fairly good supply early in 1943 have now practically disappeared from domestic agricultural use because of extraordinary demand by the armed forces. In general, the insecticide situation is good. However, in certain instances controlled use of critical materials and appropriate utilization of substitutes should protect the important food crops from serious injury.

**Calcium arsenate.** Production goals for calcium arsenate are expected to be reached. Distribution should be adequate if early ordering of supplies is sufficiently general. Nearly 75 percent of calcium arsenate consumption is for cotton protection; most of the remainder is used on potatoes and tomatoes.

**Copper fungicides.** Copper oxide will be practically unobtainable in 1944 except where some has been held over from a year ago. Limited supplies have been provided, however, for tobacco blue mold control. Copper sulfate is plentiful although slow ordering by consumers has created a shortage of warehouse storage space.

**Cryolite.** Plentiful for extensive use, especially in dusts for vegetable crops and Victory gardens.

**Formaldehyde.** Supplies are adequate.

**Lead arsenate.** Production and distribution outlook is the same as calcium arsenate. About 70 percent of the consumption of lead arsenate goes into protection of fruit crops.

**Mercury compounds.** Supplies of mercury are no longer critical and have become plentiful for seed treatment and other agricultural uses.

**Nicotine.** Supplies of nicotine will

probably be available to meet normal needs. Efforts are being made to replenish stocks which have been greatly lowered in recent months.

**Spray oils.** Supplies are adequate.

**Paradichlorobenzene.** Supplies are tight but sufficient for agricultural use.

**Paris green.** Supplies are uncertain because of the heavy requirements for control of malaria mosquito infestations.

**Pyrethrum.** Almost the entire supply of pyrethrum has been taken over by the armed forces for the control of malaria mosquitoes. The very limited amounts available for agricultural use are controlled as to end use under Food Production Order 11.

**Rotenone.** Supplies of rotenone-containing materials such as cubé are expected to be available to about the same extent as last year. In order to conserve the limited supplies the use of rotenone is controlled under Food Production Order 13.

**Sulfur.** Supplies of sulfur are plentiful, but problems of manpower, storage, and distribution may interfere with the prompt shipment of orders. Early ordering is desirable.

**Tartar emetic.** Supplies are adequate.

**Thiocyanates.** Ample supplies of these synthetic materials are expected to be available for wide use as extenders or substitutes for critical materials such as pyrethrum and rotenone.

**Zinc compounds.** Supplies are adequate.

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## Horse and Mule Situation

THE PRESENT outlook is for a good market for horses and mules as long as a shortage of tractors and automobiles for nonmilitary use exists, cultivation of record crop acreages

continues, and a heavy demand continues for horsemeat. When demobilization comes and factories convert from the making of tanks and guns to the manufacture of tractors, trucks,

and passenger automobiles, the inevitable continued mechanization of farms will further replace horses and mules on farms as well as in cities and towns. A reduced demand for horses and mules as a result of this mechanization will probably result in a continuation of the downward trend in horse and mule numbers in the post-war era.

### Numbers Declining Since 1918

Although total horse and mule numbers in this country increased steadily since the time of the first annual records (1867) until 1918, numbers have been declining each year since that date. The 12,900,000 horses and mules on farms in this country at the beginning of 1914 were about half as many as the all-time record number of 26,700,000 at the beginning of 1918. The number of horses on farms began declining in 1915 and the mule numbers in 1925. With horse numbers decreasing more rapidly than mules, the number of horses on farms January 1, 1944, dropped to slightly over 9 million from the all-time high of 21 million in 1915.

Mule numbers on farms decreased from the peak number of about 6 million on January 1, 1925 to a little over 3½ million on January 1, 1944. Horses in cities, towns, and villages have also decreased. There were about 3,500,000 horses not on farms in 1910 while at the present time there are probably less than 200,000. Mules not on farms decreased in number from 378,000 in 1920 to 75,000 in 1930. The mule is better adapted than the horse to the cotton and tobacco areas of the South, and the South has been much slower to replace horses and mules with tractors than has the country as a whole.

The decline in horse and mule numbers coincides with the expansion and development of tractors, automobiles, motor trucks, and other mechanized machinery. An average of more than 100,000 farm tractors a year has been sold since 1918 in the United States. In the 5-year period

(1936-40) this number was near 200,000 a year. The number of automobiles and trucks in operation on farms and in cities increased from 9 million in 1920 to 32 million in 1940.

The number of horse colts raised in 1943 was the smallest on record, equivalent to about one-third the number raised in 1920. Over 100,000 mule colts were on farms on the first of 1944, only 12,000 less than were raised in 1943, but the smallest crop since 1937. The number of mule colts raised has been stimulated by high prices for mules since 1935, so that the number of mule colts raised each year since 1937 has been over 100,000 a year, whereas this number averaged 67,000 a year from 1930-37.

The small number of colts raised in recent years plus the fact that imports are not expected to increase materially from current levels is leaving us with fewer horses and mules each year. Also, each year the average age of our horses and mules is increasing so that even if constant numbers were to be maintained, a larger proportion must be replaced each year. Thus it is not expected that numbers will be maintained. Annual disappearance of horses and mules has been much greater than the number of colts raised for many years. By 1950 there will be about 11 million horses and mules on farms at the present rate of disappearance.

### Number of Horses and Mules on Farms, Colts Raised, and Disappearance, 1920-43

Year	Number on farms, Jan. 1	Colts raised during year	Total disappearance during year
	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
1920.....	25,742	1,319	1,924
1925.....	22,569	750	1,333
1930.....	19,124	522	1,178
1935.....	16,653	728	1,185
1936.....	16,226	768	1,192
1937.....	15,802	806	1,363
1938.....	15,245	748	1,201
1939.....	14,792	752	1,063
1940.....	14,481	730	1,075
1941.....	14,138	635	1,051
1942.....	13,720	517	858
1943.....	13,379	478	968
1944.....	12,899	-----	-----

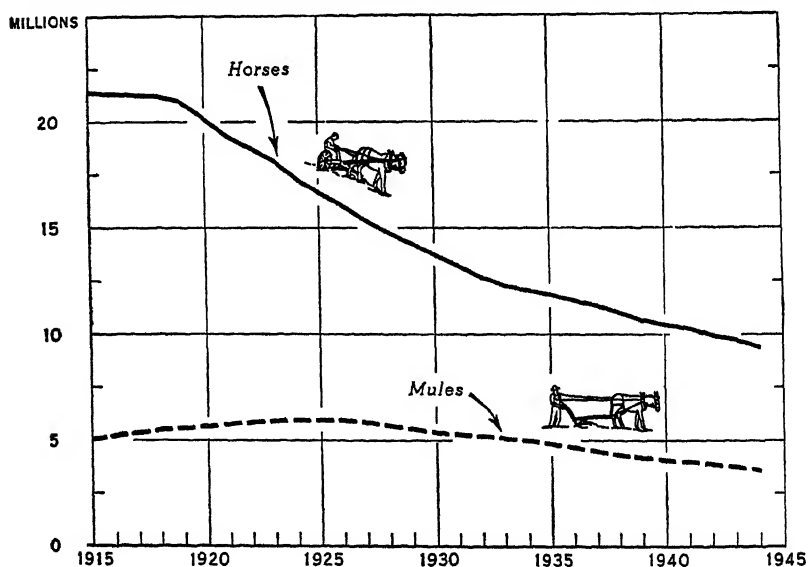
United States trade with foreign countries in horses and mules is not great. Except in World War I (1915-18), exports of horses and mules have never been large and have been largely confined to shipments of improved breeding stock to European countries together with the shipment of horses and mules for work in Mexico and Canada. Since 1916 imports of horses have usually been less than 10,000 head a year. In 1943 comparatively large numbers of horses were imported for slaughter as well as for other purposes. Canada is the largest source of horse imports into the United States, while Mexico ranks second. Imports of limited numbers of horses in pre-war years also came from the United Kingdom, Argentina, France, and Belgium. Imports and exports of horses and mules into this country will probably not be in sufficient volume to materially affect the horse and mule market in the United States after the war.

Slaughter of horses in federally inspected meat-packing plants ac-

counted for almost one-fifth of the reduction in horse numbers during 1943. About 56,500 head were slaughtered in these plants compared with 28,800 head in 1942. The number slaughtered in 1943 was surpassed only in the years 1927 to 1932 when a large slaughter was brought about because of relatively low horse prices compared with cattle prices, relatively large numbers of surplus horses, and the expansion of industries manufacturing horsemeat products. The horse slaughter in 1913 was large because of heavy horsemeat demands for pet food, fur-bearing animal food, production of tannage and bonemeal products, and human consumption.

High prices for all classes of meat animals and a short supply of meat of all types have tended to increase the use of horsemeat. Horses slaughtered are usually wild horses, horses of advanced age, or otherwise unfit for work and have a low value. However, the demand for horsemeat has been such that many good horses have been killed, because of the relatively

HORSES AND MULES: NUMBER ON FARMS, JAN. 1, 1915-JAN. 1, 1944



high prices slaughterers are paying at the present time. As long as meat is rationed and high in price, slaughterers will continue to kill large numbers of horses for meat.

The average price received by farmers for horses in 1943 was \$90, considerably higher than in 1942, and except for the years 1936-37, was the highest yearly average price since 1920, when the widespread farm use of the tractor and auto began. The average price received by farmers for mules in 1943 was \$116 per head compared with \$100 in 1942. Present market quotations indicate that mule prices are now at record highs since 1937. Present horse prices are slightly lower than last year, but are higher than for any other year since 1939. Prices for both horses and mules are low relative to prices of other farm animals. Because of this, farmers are finding it more profitable at present prices to raise cattle, hogs, or sheep than horses or mules.

### Prices Steady During War

As long as the war lasts horse and mule prices will probably be maintained at or near present levels. The outlook for horse prices after the war is less certain and will depend largely on the availability and price of farm tractors. With a large output of tractors at prices farmers can afford in post-war years, horse and mule prices will probably decline.

Current military purchases will add little, if any, to the demand for horses and mules. The number of horses required for military purposes in World War II is not as great as in World War I. In 1917 the Army owned upwards of 385,000 horses and 184,000 mules. Over two-fifths of these horses and mules were overseas. At that time horses and mules shipped outside the United States by the Army were not brought back to this country as they required special transport and could bring diseases into this country. After the last war Army horses and mules found a ready market in foreign

countries. It is expected that few purchases of horses and mules will be made by the Army in 1944. Some sales of surplus Army horses are planned in the next few months.

Some have thought that after the war the Army "jeep" may be used for motive power on farms. This vehicle may have limited supplementary use on farms for hauling purposes, but as a source of drawbar power it has several serious limitations. It is not adapted to the cultivation of row crops as it has little clearance and its wheel spread is not adjustable to take care of variations in the width of rows. The high speed motor and high gear ratio of the "jeep" makes it use more fuel and will cause it to wear out sooner than the small type farm tractor pulling heavy loads at low speeds.

How extensive will be the mechanization of farms after the present war? This is still unpredictable, but the trend is evident. There will be a more widespread use of all types of mechanical power on farms. Low horsepower units will be developed to take the place of horses on the cultivator and other light draft jobs. The decrease in motive power on farms brought about by a reduction in horse and mule numbers will be replaced largely by tractors. Colts raised this year will not be able to work until at least 1948. Once farmers have purchased tractors, equipped them with farm tools that are made for tractors, they will be reluctant to again use horses and mules. Numbers of horses and mules will decrease even more and so the horse and mule will not occupy such a high place in our farm economy as they do today.

GROVER J. SIMS

*Bureau of Agricultural Economics*

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*Insurance: Emergency Farm Labor Program.* Processed. 9 pp. Bureau of Agricultural Economics. Washington. April 1944.

Describes insurance protection applicable to various farm labor programs.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1937-39 = 100) <sup>1</sup>	Income of industrial workers (1937-39 = 100) <sup>2</sup>	1910 = 100			Index of prices received by farmers (August 1909-July 1914 = 100)				
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities, interest, and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1934.....	75	76	100	122	120	95	101	89	70	84
1935.....	87	88	117	125	130	103	114	116	116	115
1936.....	103	100	118	124	123	111	125	114	113	120
1937.....	113	117	128	131	134	126	130	110	132	127
1938.....	89	91	115	123	127	125	114	109	115	113
1939.....	109	105	113	121	125	123	110	95	112	108
1940.....	125	119	115	122	126	126	119	96	111	112
1941.....	162	169	127	131	133	154	139	121	146	140
1942.....	199	238	144	152	151	201	162	151	188	173
1943.....	239	305	151	167	164	204	193	190	209	200
1943-April.....	237	300	151	165	162	239	194	174	220	202
May.....	238	302	152	167	163	---	189	175	216	200
June.....	236	304	152	168	164	---	187	179	213	199
July.....	240	306	151	169	165	274	189	183	209	198
August.....	242	312	151	169	165	---	192	192	209	200
September.....	245	315	151	169	165	---	195	201	208	203
October.....	247	317	150	170	166	280	194	212	204	204
November.....	247	318	150	171	167	---	202	210	193	201
December.....	241	316	151	173	169	---	203	212	191	200
1944-January.....	243	319	151	174	169	275	201	177	194	193
February.....	244	321	151	175	170	---	201	169	199	194
March.....	242	---	162	176	170	---	199	162	203	194
April.....	---	---	---	176	170	202	196	151	203	191

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and livestock	Parity ratio <sup>1</sup>
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934.....	91	95	159	97	95	88	95	98	90	70
1935.....	97	107	174	94	120	82	110	102	100	84
1936.....	108	102	165	95	112	92	104	107	111	89
1937.....	120	125	204	90	120	101	110	115	122	91
1938.....	75	71	176	67	88	70	88	80	97	78
1939.....	73	69	155	70	90	68	91	80	95	76
1940.....	84	82	136	77	96	73	111	88	100	79
1941.....	97	89	159	107	130	85	129	106	124	93
1942.....	120	111	252	149	172	114	163	142	150	108
1943.....	148	147	325	160	190	179	245	183	193	118
1943-April.....	143	141	316	162	185	162	264	192	197	122
May.....	144	144	319	162	187	170	270	187	191	119
June.....	145	143	320	161	187	196	261	190	195	119
July.....	148	151	321	158	183	216	220	184	193	117
August.....	147	152	326	160	196	202	186	183	192	116
September.....	150	156	315	163	199	205	180	182	193	117
October.....	157	158	335	164	201	195	187	183	194	117
November.....	160	158	347	156	202	196	228	187	194	116
December.....	166	165	349	160	202	208	223	192	196	116
1944-January.....	170	168	350	162	203	204	267	199	196	116
February.....	170	169	348	161	205	206	247	196	195	115
March.....	169	171	351	161	207	215	242	198	196	115
April.....	171	172	352	163	207	237	220	200	196	115

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total Income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Ratio of prices received to prices paid, interest and taxes.

NOTES.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION

JUNE 1944

## *A Brief Summary of Economic Conditions*

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CIVILIAN FOOD CONSUMPTION per capita throughout 1944 may average about the same as last year. \* \* \* Record egg production has depressed prices in recent months, but the seasonal rise in prices from now until November is expected to be greater than last year. \* \* \* This season's prospective wheat crop is expected to be fully adequate for normal food, feed and seed uses. \* \* \* Despite declining livestock numbers, reserve feed grain supplies for the country as a whole will be largely depleted by the end of summer. Thus supplies for the next feeding year, beginning in October, will have to come mostly from 1944 production and imports. \* \* \* Fertilizer supplies, including nitrogen, are expected to be adequate for summer and fall application on essential crops. \* \* \* Prices paid by farmers in mid-May averaged the same as a month earlier, while prices received by farmers were down 1 point, averaging 114 percent of parity compared with 115 percent a month earlier and 119 percent a year earlier.

# Commodity Reviews

## FOOD SUPPLIES

**E**VEN THOUGH a fourth of this year's food output (or equivalent) will be used to meet war requirements—compared with only a fifth in 1943—civilian food consumption per capita in 1944 is expected to average about the same as last year. The rate of civilian consumption during the first 4 months of 1944 has been somewhat higher than in 1943 and civilian food supply prospects are relatively good for the next few months.

**Civilian Consumption of Principal Foods, Calendar Years, 1935-39 Average, 1943 and 1944**

Food item	Consumption per capita in pounds		
	1935-39 average	1943	1944 preliminary appraisal
Red meats.....	126	137	145
Poultry meats.....	21	31	27
Eggs <sup>1</sup> .....	298	344	353
Fluid milk and cream.....	340	403	396
Cheese.....	5.5	5.0	4.6
Butter.....	16.7	12.0	12.6
Fats and oils <sup>2</sup> .....	31	34	33
Fresh fruits.....	133	121	130
Processed fruits <sup>3</sup> .....	25	25	23
Fresh vegetables.....	235	233	213
Processed vegetables <sup>4</sup> .....	32	31	29
Potatoes and sweetpotatoes <sup>4</sup> .....	151	163	142
Sugar.....	97	78	81
Corn products.....	39	44	43
Wheat flour.....	154	157	158
Coffee.....	14	13	15
Tea.....	0.7	0.5	0.6
Cocoa.....	4.4	3.1	3.9

<sup>1</sup> Numbers, not pounds. <sup>2</sup> Excluding butter.

<sup>3</sup> Pack year. <sup>4</sup> July 1 year for potatoes, crop year for sweetpotatoes.

Because of record production, together with shipping and storage difficulties, civilian meat consumption for the first half of 1944 is expected to be at the unusually high rate of 155 pounds per capita and for the whole year about 145 pounds. This is 8 pounds more than the 137 pounds per capita consumed in both 1943 and 1942, and considerably higher than the 126-pound pre-war 1935-39 average.

With recently improved milk production prospects, the civilian supply of all dairy products in 1944 may approximate 1943. Butter supplies are expected to be larger, fluid milk about the same, but cream, cheese, and condensed and evaporated milk somewhat smaller for the whole year.

During the early summer, potatoes and eggs will continue to be abundant despite the seasonal decline in egg supplies.

Total civilian supply of fruits and vegetables throughout 1944 will be at least as large as last year. The prospective 15 to 20 percent reduction in civilian canned goods, necessitated by heavy war requirements, is expected to be offset by large fresh supplies, particularly vegetables.

## WHEAT

**T**HE 622 million bushel winter wheat crop indicated in May, being 60 million bushels above that indicated in April, is one-fourth larger than the 1943 winter wheat crop and 16 percent above the 10-year (1933-42) average.

Assuming spring wheat yields equal to those of the post-drought years on the acreage intentions report, and including the May estimate for the winter crop, the indicated 1944 production of all wheat would be approximately 885 million bushels. A crop of this size would take care of all the wheat needed for domestic consumption as food as well as for seed, normal feeding, moderate use for alcohol, and moderate exports. While the improved April indications have eased the prospective supply situation, this year's crop would still not be large enough to take care of above normal feeding and very large exports; these would necessitate substantial imports if our reserves are to be maintained at a desirable level.

## FEED

**D**URING THE 3 months ended January 1, 1944, the first 3 months of the current feeding year, disappearance of feed grains was the greatest on record for that period. Disappearance of feeds was also high during the next 3 months but at a slightly lower rate than in the January-March period a year earlier. Present indications are that feed disappearance is continuing at a relatively high rate compared with an average of former years, but slightly less than at this time in 1943.

Sufficient supplies of feed grains are in the country as a whole to carry through until new-crop grain is obtainable although they are not evenly distributed. It is expected that by October 1 stocks of feed grains will be at the lowest level for that date since 1937. Supplies of feed for next year, of course, depend mainly upon production this year.

Byproduct feed production continues about the same as last year or slightly above, and supplies, while not able to completely satisfy demand, are in a relatively better position than that of feed grains.

A bright spot in the feed picture is the present prospect for crops, pastures, and ranges. The extreme dryness of last fall and early winter was followed by an unusually wet February, March, and April. Although cool weather delayed good growth during March and April, warm weather and the favorable moisture conditions in recent weeks over most of the country are expected to produce good grazing and forage. In addition, prospects for crops have improved considerably.

## DAIRY PRODUCTS

**L**ATE-SPRING milk and butterfat prices to farmers averaged higher than a year earlier. Sharp increases in feed prices were not fully offset by the higher prices and Government pay-

ments. The milk-feed ratio in May was 1.27 as compared with 1.30 a year earlier; while the butterfat-feed ratios were 23.1 and 24.7 respectively. However, it is likely that milk-feed ratios will be more favorable than last year throughout most of 1944, while butterfat-feed ratios will become more favorable during the last half of 1944.

New dairy production payments announced by the War Food Administration reduce milk payments 15 cents per cwt. and butterfat 2 cents per pound during most of the summer. The May-August rates are 35 to 65 cents for whole milk and 6 cents for butterfat. But from September 1944 through March 1945 payments will be increased 25 cents per hundredweight on milk and 4 cents per pound on butterfat.

Under WFA authorization increasing sales quotas of fluid cream, fluid milk byproducts, and ice cream during May and June, civilians will get more of these products. The measures were designed to facilitate full utilization of anticipated larger-than-usual seasonal increases in milk production.

Civilian supplies of butter and American cheese were expected to be larger during May and June of this year than a year earlier and also larger than in the first quarter of 1944. Allocations were 120 million pounds of cheese, as compared with 90 million pounds in the first quarter, and 432 million pounds of butter, as compared with 410 million pounds in the first quarter. Evaporated and condensed milk allocations remain unchanged.

Total production of manufactured dairy products, milk equivalent basis, made a greater percentage increase from February to March this year than at any time since 1926. This was a result of more-than-seasonal increase in milk production in that period, plus limitations on fluid milk and cream sales which prevented the usual seasonal increase in sales of those products.

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	157	115
February.....	184	159	116
March.....	192	160	120
April.....	197	162	122
May.....	194	163	119
June.....	195	164	119
July.....	193	165	117
August.....	192	165	116
September.....	193	165	117
October.....	194	166	117
November.....	194	167	116
December.....	196	169	116
<b>1944</b>			
January.....	196	169	116
February.....	195	170	115
March.....	198	170	115
April.....	199	170	115
May.....	194	170	114

<sup>1</sup> Ratio of prices received to prices paid, interest, and taxes

## POULTRY AND EGGS

**E**GG production in the first third of 1944 was 9 percent larger than the previous record of a year ago, and 56 percent above the 10-year average. The seasonal peak has passed and a continuing decline has started which will culminate in the seasonal low point in November. The late winter and early spring rate of culling of laying flocks was unusually low, but a considerable increase over last year is expected by early summer.

Increases are anticipated in egg prices during the summer-fall period this year over the same period last year. The War Food Administration has authorized its agents buying current-receipt eggs to pay 27 cents per dozen instead of 26 cents as formerly provided.

Supplies of both poultry and eggs have been at record levels thus far in 1944. Farm prices for chickens in mid-May were 24.4 cents per pound live weight, compared with 24.7 cents

a year ago. Average feed costs in farm poultry rations on May 15 were 13 percent more than on May 15, 1943.

There were 164,876,000 chicks and young chickens of this year's hatching on farms May 1, about 1½ percent less than a year earlier but 33 percent above the 10-year average. Indications are, however, that there will be a much smaller hatch for flock replacement purposes in the May-July period this year than last.

## LIVESTOCK

**H**EAVY receipts of hogs for slaughter in late April caused hog prices of support-weight range to drop to support levels at most markets. Large daily carryovers of unsold hogs at principal markets were common with a weak demand for hogs at support prices. Consequently carryovers were made up of hogs in the support price range so that sows and butcher hogs lighter than or heavier than support weights suffered large price discounts. To remedy this, good and choice butcher hogs weighing 180 to 200 pounds were included in the support price program beginning May 15.

Hog prices are not likely to improve until most of last fall's 48 million pig crop has been marketed, although the freeing of pork from ration points will increase the demand for hogs. Large marketings are anticipated through September 30, when the support price will be lowered from \$13.75 to \$12.50 at Chicago, and will apply to good and choice butcher hogs weighing 200 to 240 pounds (or 180 to 240 if the emergency support price extension remains in effect that long) instead of the 200- to 270-pound weight range supported for the largest part of 1943.

Mid-May prices for cattle in general were at the highest levels of the year and these prices were at about the same level as in 1943 for all but the lowest grades. Prospect of larger cattle slaughter for the rest of this

year than last makes it unlikely that prices for all cattle will average as high from now on this year as in the same period in 1943.

A 6-percent decrease from last year in the early spring lamb crop, poor development of lambs in California (the principal early lamb State), and an anticipated smaller total late lamb crop than last year will probably add up to higher lamb prices this year.

## FATS AND OILS

**P**RODUCTION of fats and oils reached a new high in the first quarter this year principally because of record slaughter of hogs and cattle.

Seasonal decline in production and stocks of fats and oils is expected to take place till October. Reduced production is likely in 1944-45 because of a smaller pig crop this year. A possible increased European demand is another factor pointing to increased tightness in United States supplies.

Abundant lard supplies made possible the removal of restrictions on the use of lard and rendered pork fat in making soap and edible products from May 15 through June 30. Lard or rendered pork fat bought during this period also may be used without restriction in the manufacture of edible products prior to October 1 if reported to WFA by July 15.

A total of 43,273,000 bushels of soybeans were crushed during the 3-month period January 1 to March 31, 1944, or more than 15 percent above a year earlier. Current stocks are somewhat lower than at the same time last year, but a reduction in the year-end carry-over would permit soybean processing at a rate at least as high.

## WOOL

**M**ILL consumption of apparel wool increased sharply in the first quarter of 1944, halting the downward trend which had been in progress since early 1943. Consumption from Jan-

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		May 1943	April 1944	May 1944	Parity price May 1944
	August 1900-July 1914	January 1935-De- cember 1939				
Wheat (bushels)..... dollars..	0.884	0.837	1.228	1.47	1.47	1.50
Corn (bushel)..... do.....	.642	.691	1.034	1.15	1.15	1.09
Oats (bushel)..... do.....	.399	.340	.612	.794	.799	.678
Rice (bushel)..... do.....	.813	.742	1.827	1.90	1.78	1.38
Cotton (pound)..... cents..	12.4	10.29	20.09	20.24	19.80	21.08
Potatoes (bushel)..... dollars..	.097	.717	1.903	1.37	1.34	1.22
Hay (ton)..... do.....	11.87	8.87	12.05	10.20	10.10	20.20
Soybeans (bushel)..... do.....	1.96	.954	1.72	1.91	1.93	3.1.03
Peanuts (pound)..... cents..	4.8	3.55	7.01	7.03	7.74	8.10
Apples (bushel)..... dollars..	.96	.90	2.40	3.17	3.19	1.03
Oranges, on tree, per box..... do.....	1.81	1.11	2.35	2.20	2.43	3.1.97
Hogs (hundredweight)..... do.....	7.27	8.38	13.89	13.00	12.70	12.40
Beef cattle (hundredweight)..... do.....	5.42	6.50	12.88	12.10	12.10	9.21
Veal calves (hundredweight)..... do.....	6.75	7.80	14.26	13.20	13.30	11.50
Lambs (hundredweight)..... do.....	5.88	7.79	13.82	13.60	13.40	10.00
Butterfat (pound)..... cents..	26.3	29.1	50.7	50.9	50.7	42.3
Milk, wholesale (100 pounds) <sup>1</sup> ..... dollars..	1.60	1.81	3.04	3.19	3.14	2.45
Chickens (pounds)..... cents..	11.4	14.9	24.7	23.7	24.4	19.4
Eggs (dozen)..... do.....	21.5	21.7	34.2	27.1	27.2	30.0
Wool (pound)..... do.....	18.3	23.8	42.2	39.7	40.6	31.1

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments since April 1944.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

uary through March was at an annual rate of 609 million pounds (scoured basis) compared with the 1943 record consumption of 592 million pounds.

Only a small quantity of wool from the 1944 clip had been appraised for purchase by mid-May. The average price received by farmers at that time was 40.6 cents per pound as compared with 42.2 cents a year earlier.

The Commodity Credit Corporation bought 275 million pounds of domestic wool between April 25, 1943, and April 30, 1944. Sales in that period totaled 100 million pounds and unsold stocks on April 30 amounted to 175 million pounds.

Small sales during the past year accent lowered demand for domestic wool since foreign wools are obtainable for much lower prices while Army orders, the principal outlet for domestic wool, have declined.

## FARM LABOR

**F**ROM ABOUT June 15 through the middle of August small grain producers, especially in Kansas, Nebraska, the Dakotas, and Montana, are expected to be confronted with the problem of harvesting a larger crop than last year but with a smaller farm work force than last season. On the first of this May there were 691,000 people working on farms in this area compared to 730,000 on the same date in 1943. Ordinarily farm employment in the grain area increases 15 or 20 percent from May to the peak harvest period.

To help with the 1943 wheat harvest about 3,000 people from drought-affected areas of Mississippi, Arkansas, and Oklahoma were transported to North and South Dakota and Montana. It is not now possible to determine the number of such workers that will be available in 1944. Also, nearly 6,000 soldiers were assigned to work in the 1943 harvest of grain but here again such help may not be obtainable this season. However, there are some

prospects of using Mexican workers and also war prisoners in the grain fields.

Most combines will see service on many farms this summer and an unusually large number of them will make the circuit from Texas north to the Canadian border. It is also expected that combines from Canada will be working in American grain fields during the coming months.

## FERTILIZER

**F**ERTILIZER supplies available during the summer and fall months will be adequate to supply all the needed requirements for increasing food production where fertilizer can be used to advantage. Fall application of nitrogen and mixed fertilizers on grass, hay and forage crops will assure early grazing and increased production in the spring of 1945.

Nitrogen supplies in the form of solutions for use in mixed fertilizer will be adequate to meet the demands during the summer and fall months. The ammonium nitrate available for fertilizer use is now being conditioned so that it can be stored and maintained in a satisfactory physical condition for a considerable length of time. Other nitrogen materials will be available at a rather uniform rate during the summer and fall months. This will provide adequate supplies of nitrogen to meet all the needs for direct application, and for use in mixed fertilizer for the fall needs with increased quantities wherever it is practical to be used for increasing production, especially livestock feeds.

Superphosphate production will be at the rate of approximately 8,000,000 tons (basis 18 percent) by July 1 and this will be further increased during the fall months depending upon the supplies of rock, sulphuric acid and labor.

Potash production for 1944-45 will be at least 15 percent more than the supply available for 1943-44.

The fertilizer program has changed during the war period from a seasonal business to a year-round enterprise. In pre-war years the production and sale of fertilizers reached a peak in March and April of each spring with over 50 percent of the total quantities being distributed in this short period.

In order to obtain maximum production of supplies of nitrogen, phosphorus and potash needed for crop production, it has been necessary to maintain production and distribution of material to fertilizer mixers on a year-round basis. During the last year the movement of fertilizer for spring use started to the local dealers and farmers in November and December and reached a high level in January through March with some drop-off in April. This spread the delivery over a 4 or 5 months period rather than the usual short 2 month period.

## FARM MACHINERY

**P**RODUCTION of large combines and labor-saving haying equipment was running behind schedule at the end of April.

With no prospect of getting, in time for 1944 harvests, the full amounts of new equipment which had been scheduled for production—and which had been regarded as minimum requirements—growers of wheat and other small grains and hay face the necessity of relying heavily on custom work. This is particularly true in areas where hay and small grain acreages are large. Custom use of large combines and the more expensive types of haying equipment would be necessary even if manufacturers were completing their production schedules on time. Therefore, in addition to using each machine on as many fields as possible, farmers will again need to take a chance on the old machine, reducing the element of chance as much as possible through advance repair work.

The production of corn pickers also was lagging as the last quarter of the

production year began. However, with several months remaining before the season of use, this lag was not regarded as being so serious as delays in the production of other harvesting machinery. There was still time to complete the scheduled production if shortages of chain and other component parts as well as manpower in the manufacturing plants—problems applying to all machinery production—could be sufficiently overcome.

## CONTAINERS

**E**VEN THOUGH food container supplies are severely strained, it is expected that they can be stretched during the present season to keep the Nation's food supplies moving. However, there may be interruptions in some lines. The difficulties are largely traceable to the extremely heavy shipments of food and material to the armed forces, with "V-boxes" requiring three or four times as much paperboard as domestic containers for the same amount of food.

Increased needs for container and shipping uses have been responsible for a sharp increase in lumber consumption since 1941 while lumber production has been declining. First quarter lumber stocks in 1944 were approximately 7 billion board feet, as contrasted with more than twice that amount for the first quarter of 1943. The 1944 figure may be considered an irreducible working minimum and in certain lines there is no inventory cushion.

For fruit and vegetable growers the tight lumber situation is reflected in a shortage of new wooden containers for greatly increased 1944 production. Other factors accounting for this shortage, estimated as varying from 10 to 25 percent according to area, are inadequate labor in the factories of hamper and round stave basket manufacturers, and low ceiling prices. With a small carry-over from last year, the shortage must be made up largely



through re-use of secondhand containers. Special freight rates are already in effect for the shipment of secondhand fruit and vegetable containers in many regions. These lower costs for re-using second-hand packages will make possible the shipment of a greater volume of fruits and vegetables, as well as other perishable products.

Rag cases are also a serious problem because of the shortage of suitable ones to store the large spring surplus crops. Production of cannery cases, which represent 25 percent of the container of paperboard, is running considerably behind. The need to provide the needed containers for meat, particularly pork, is a complicating factor.

With the allocation of container metals much less than had been hoped for, the situation for tin and steel containers is expected to be very tight during July and August. The outlook for paper milk bottles is affected by the freezing of production as of the last quarter of 1943. This was the highest attained up to that time, yet more are needed. Although an increase cannot be obtained, an alternative is the glass bottle. Needs for glass as outlined in the food program can be supplied, although little in the way of surplus is in prospect. The situation in regard to metal and paper closures is similar to that of glass. The needs for butter and lard cartons apparently can be met, although other lines will have to suffer as a result.

The success of packaging the Nation's food supply depends on the maximum practicable conservation of critical container materials. Salvage of second-hand containers and their return to packers and shippers will go a long way toward avoiding much waste.

## FRUIT AND NUTS

**O**N MAY 1 larger-than-average deciduous fruit production was indicated for this season, and con-

siderably larger than last year's low production. Favorable apple prospects were evident in nearly all commercial areas. Very little winter or spring freeze damage occurred to either trees or buds, and the bloom and set were generally heavy.

Late spring frosts reduced excellent early season peach prospects in the southern and bordering States, but in other sections of the country conditions were generally favorable. Pear prospects were good in the Pacific Coast States and other important pear-producing States. Indications point to a better-than-average grape crop but not as good as last year in California.

Present prospects indicate good crops of California almonds and walnuts, and Oregon filberts. Southern pecan trees were in good condition late in the Spring, indicating a favorable crop.

## TRUCK CROPS

**F**RESH market commercial truck crop production increases over last spring's crops are expected to be rather general, with only carrots, snap beans, lima beans, and beets showing decreases.

Indicated 1944 spring production, by crops, in terms of percentage of 1943 and the 10-year (1933-42) average, respectively, is as follows: Eggplant, 186 and 147; cantaloups, 147 and 100; watermelons, 161 and 109; onions, 165 and 159; honeydew melons, 112 and 48; honeyball melons, 117 and 38; cabbage, 119 and 86; lettuce, 121 and 123; tomatoes, 111 and 124; green pepper, 143 and 119; green peas, 105 and 82; celery, 122 and 115; spinach, 103 and 120; shallots, 107 and 71; cauliflower, 105 and 87; cucumbers, 116 and 76; asparagus, 103 and 122; beets, 89 and 47; green lima beans, 93 and 108; snap beans, 78 and 76; and carrots, 65 and 128 percent.

# A SALUTE TO CROP REPORTERS

**A**S PRODUCERS, dealers, and processors of farm commodities, you are the main source of information on production and prices of food, fiber, and oil crops, and other wartime products of the farm. When reliable information is needed, it is best to get it at its source. That is why the Department asks you for these reports. That is why you have been receiving *and answering* more requests for information than in peacetime.

The tempo of the war has not only increased the volume of your work as a crop, livestock, or price reporter but it also has required speedier action. Often the time element involved in obtaining the information and filing your report has been of paramount importance. Your cooperation and fine response to these new demands have been important contributions to the war effort.

The public-spirited manner in which you are performing your increased crop reporting functions, along with your other wartime work, is a fine example of service to your country. You have worked longer, harder hours at your job of producing, processing, or handling farm products. And after a hard day's work, you have sat down to fill out a report in order to provide the Nation, through your Government, with the best up-to-date information that was available.

I take this opportunity to salute you, to express the sincere appreciation of the Department for the service you perform as a Crop Reporter.

CLAUDE R. WICKARD  
*Secretary of Agriculture*

## Getting the Facts on the Farm Front

**B**ASIC information on the Nation's agricultural output, in more detail than ever before, is a prime essential in the current national and world situation. This stems from the great emphasis that necessarily must be placed upon this country's production of food and of other agricultural commodities necessary to ultimate victory of the Allies.

Month-to-month changes in our agricultural picture can be portrayed accurately and quickly only through the wholehearted cooperation and interest of the reporters in the ranks of producers and handlers of farm products. Farmers, merchants, bank-

ers, warehousemen, processors, and others supply timely and essential information on agricultural production, stocks, prices, marketings and related subjects. It would be difficult to over-estimate the far-reaching importance and usefulness of their composite reports on the Nation's agricultural effort.

Each year, on an average, about 600,000 farmers make out such reports and return them promptly to the state offices of the Bureau of Agricultural Economics. Something like 70,000 of these producers make up the corps of voluntary crop correspondents who each month stand ready

to report on cotton and other crops, on livestock, and on general agricultural conditions in their respective localities. Another 90,000 or more may furnish periodic special reports on some major crop or group of crops they are engaged in producing, such as cotton and commercial fruit. Nearly 450,000 farmers report once or twice a year regarding the crop acreage or livestock numbers on their individual farms.

In addition to the farm front, country merchants and local dealers in farm products, to the number of approximately 85,000, report several times a year to the Bureau on the prices received by farmers for the products they sell and the prices paid by farmers for articles they buy for family living and for production purposes. No less important are the 90,000 odd establishments—country mills, elevators and warehouses, hatcheries, sugar beet factories, dairy product manufacturers, canning plants, and various other processors or handlers of agricultural products—who report regularly on some phase of their operations.

### **Interest in Food More General**

Never before has food been the universal topic of conversation and concern that it is today. Everyone displays more than usual awareness of the significance of our food supplies, and is alert to notice from day to day what significant changes are in prospect. Housewives and workers in whatever capacity or occupation—in fact all of us in our status as consumers—have been made intensely food conscious through food rationing and changing point values, Victory gardens, and discussions on nutrition and diets. There is widespread realization that the Nation's expanded agricultural production must be wisely apportioned to satisfy civilian needs, meet the tremendous military requirements, contribute to the urgent demands of our allies, and aid in providing initial relief to liberated populations.

Adequate, timely and reliable facts

on actual and prospective agricultural production are indispensable to those with high responsibility for the Nation's welfare in this emergency. Federal, state and local leaders of agricultural programs are charged with the responsibility of setting up and attaining well-balanced goals far above peacetime needs. Hence they must have the facts about food, fiber, oils and other farm products in sufficient detail, currently, to reach intelligent decisions in guiding their actions.

### **Basic Data Widely Used**

National and state legislators and public administrators concerned with maintaining the equilibrium of the agricultural plant in the total war effort, likewise are dependent upon what the month-by-month and year-by-year facts reveal as a basis for their policy and actions. Agricultural educators, analysts, editors, and extension workers must have unquestionably sound statistics on the production and supply of farm products, current and past, if they are to furnish wise counsel on the special agricultural problem resulting from the war economy. Rail and truck carriers, storage establishments, processors, and others in trades and enterprises whose job it is to move products from the point of production to the point of their use require dependable reports on agricultural conditions and production prospects in some detail, to assure that their operations will be most economically effected.

This war-quickenened interest and the widely extended needs for basic crop and livestock estimates has brought about pronounced expansion in both the volume and character of official estimating and reporting services. A crop, of comparative insignificance not so many years ago may leap to national prominence over a span of a very few years. An instance is the rise in soy-bean production as a major source of much-needed vegetable oils. Other crops or products relatively unnoticed before the war suddenly

become strategically important. Background information on production and location of supplies becomes imperative as a basis for directing utilization to the most essential purposes, or to provide for a desirable expansion of production.

### **Some Crops Reported Oftener**

A number of food crops and products are particularly adaptable for shipment overseas because they represent or can be converted into concentrated foodstuffs, and thus conserve limited shipping space. For products of this type, such as dry beans, dried peas, rice, cheese, milk, eggs, and potatoes, new and more frequent reports were needed to gage supplies, their availability and their location. Vegetable and other agricultural seeds, as a group, have naturally assumed a tremendous importance in the wartime economy. To meet unusual demands a wide variety of special reports has had to be added for some 80 crops in this category. For 50 major kinds of vegetable seeds alone, upon which no information had previously been available, periodic reports covering acreage, yield, production, and stocks, were among the first to be initiated to meet primary needs soon after the opening of the present European War.

By and large, most of the newer reports have represented some extension or amplification of official reports already well-established. The existing program included official estimates of acreage, yield, production, and stocks of crops, numbers of livestock, production of meat animals and livestock products, utilization and price of the various products, as well as estimates of farm labor, farm wage rates, and other items. These widely known reports, furnishing periodic estimates of national and state production and supplies of farm products, continue as a necessary foundation for newer developments. In addition, a considerable demand has arisen for facts on the utilization of crops and livestock products, and on price levels, trends and comparisons.

In addition to national and state requirements, the local adaptation and applications of the war food program, and other local activities in the agricultural war effort, have made heavy demands upon the estimating services. Among these localized activities are farm labor placement, wage considerations, and effective utilization of transportation, storage, and other essential facilities or services. This has resulted in the need for estimates of all kinds for producing areas smaller than a State. In some cases, breaking state data down into estimates for the major districts or producing areas of the State will satisfy the need. But frequently county estimates are urgently desired.

The preparation of reliable estimates for these smaller areas usually requires reports from many more farmers asking much more detailed information as to their individual operations. Such estimating work is attended with somewhat greater statistical difficulties than are involved in preparing estimates for a State as a whole. Fortunately, a valuable backlog of experience and data had been built up through several lines of work already carried out by the Bureau's State agricultural statisticians in 41 field offices. One of these activities was concerned with the preparation of estimates for use in previous special conservation programs for certain staple crops. Another notable contribution occurred as a result of the joint effort and support of the official cooperating agencies in 33 States over a long period of years.

### **County Estimates Invaluable**

County or localized estimates have been invaluable in many ways. Among the more general are the planning and reaching of objectives of a Nationwide character in which each State and county have a coordinate interest. Typical of these are the use of the county or localized estimates as a basis for gaging the maximum contribution the farmers in each State and county could make to balanced

production objectives for the country as a whole, and their use in conjunction with the setting of county goals. These estimates also provide part of the factual foundation upon which other local matters may be impartially considered and acted upon such as, setting quotas for farm machinery, building materials, or labor.

As wartime demands have made it necessary to obtain additional detailed information, it has been sought at the source. More inquiries have been sent to producers and handlers of farm products. These had been proved by long experience to be the

dependable source of reliable information. And the reporters responded. They are filling out survey blanks after longer-than-usual days of harder work than ever before. They feel it to be their duty to produce the food and supplies, and to perform the essential services requested by Government. But it is patriotic service beyond the call of duty when they furnish the facts in addition to the food, fiber, and fats.

PAUL L. KOENIG, *Head*  
*Division of Agricultural Statistics*  
*Bureau of Agricultural Economics*

## What's Happened to Feed and Livestock?

CHANGES in the output of livestock products during the war have roughly paralleled changes in livestock-feed price relationships. Variations in the price ratios, in turn, have grown out of changes in the supply of feed and the demand for livestock products and out of governmental action affecting prices.

Four general periods are worth examination from this point of view: (1) From 1937 until September 1939; (2) September 1939 until April 1941; (3) April 1941 until April 1943; (4) April 1943 until the present. The first of these periods is characterized by recovery from the drought with increasing production and accumulation of reserve stocks of feed, and slow increases in livestock production. The second is characterized by an uncertain and declining market for livestock products. The third period is characterized by strong demand, a rapid increase in feed production and a much more rapid increase in livestock production; the fourth, by adjustment in prices and an effort to balance output of the various classes of livestock products with dwindling feed supplies.

Following the droughts of 1934 and 1936, feed grain supplies in 1937 were

small and livestock prices were quite low in relation to feed prices. Crop yields per acre in 1937 were the best in nearly a decade, and near the end of the year the livestock-feed ratios generally became favorable to the output of more livestock products.

The livestock-feed price ratios remained favorable, for the most part, through 1938 and 1939 and the production of nearly all classes of livestock products increased. Milk production and the pig crop set new records.

September 1, 1939, when Hitler invaded Poland, the outlook for farm markets was confused. An outlook statement commented, "Of all farm products, hogs are the only one for which a significant expansion in the export outlet is probable for 1939-40 as a result of the European war." The carryover of corn October 1, was the largest, by far, in a decade and a half.

Near the end of 1939 the hog-corn ratio began a downward plunge owing to a drop in hog prices that carried the farm price to less than \$5.00 per 100 pounds and made hog production unattractive throughout the next year. The total pig crop in 1940 was down 8 percent from the crop in 1939; and in

December 1940, farmers reported that they intended to reduce the 1941 spring pig crop by 14 percent from the spring crop of 1940. Export markets—even for pork products—were virtually shut off in 1940 as a result of the war.

### Large 1941 Pig Crop Asked

On December 26, 1940, the Secretary of Agriculture announced that, with increased consumer purchasing power because of the defense program, a 1941 spring pig crop about the size of the 1940 crop seemed desirable. Moreover, he recommended increased marketings of cattle. The statement said in part:

"With prospects for higher hog prices in 1941 and 1942, farmers \* \* \* should consider holding back or purchasing more breed sows and gilts.

"A near-record supply of feed for livestock is on farms and in storage and in most areas farmers have sufficient corn supplies for maintaining the number of pigs raised in 1941 at the 1940 level. The 475 million bushels of corn in the Ever-Normal granary is equal to about one-fifth of a normal year's crop.

"A considerable part of this corn is owned by the Commodity Credit Corporation. To help stabilize livestock production \* \* \* the CCC will sell corn in steel bins or country elevators at about 65 cents per bushel at the point of storage \* \* \*"

By January 1941 the hog-corn ratio was again favorable to greater production of hogs. Farmers reduced the number of sows bred only 6 percent instead of the intended 14 percent; and thanks to more pigs saved per litter, the spring pig crop was down only 1 percent from that of the previous spring.

In March 1941 Congress passed the Lend-Lease Act, which included farm products among items that could be transferred to countries whose defense we deemed necessary to our own defense. On April 3, 1941, the Department of Agriculture announced a program for increased production of

pork and lard, dairy and poultry products. It reported plans to support prices, through June 30, 1943, on the basis of prices at Chicago, at approximately the following levels: Hogs, \$9 per 100 pounds; butter, 31 cents a pound; chickens, 15 cents a pound; eggs, 22 cents a dozen.

In a radio talk April 19, the Secretary of Agriculture said in part: "This is a program to provide an abundance of food for our own people, just as much as it is a program to produce for Great Britain.

"Specifically, our food plan means converting the feed supplies in the Ever-Normal Granary into food supplies. After the droughts of 1934 and 1936 burned up over two billion bushels of corn \* \* \* we decided it would be a good thing to store up reserves against any emergency. \* \* \* Having them, it is easy to raise more livestock and more poultry \* \* \*.

"Great Britain needs pork, dairy products, poultry products, and other foods. She does not need and is not likely to need very much of our cotton, wheat, or tobacco for some time to come. Our stocks of these commodities are large. \* \* \* It seems the part of common sense to grow more of the things we need; less of the things we don't need."

### 1940 Corn Carryover Large

The carryover of corn on October 1, 1940, was 688 million bushels—80 percent above the greatest volume reached in any year from 1926 through 1938. And on January 1, 1941, the supply of corn and oats per animal on farms was nearly 16 percent greater than it had been in any year from 1927 through 1937.

In response to increased defense production, rising incomes, and some gain in shipments overseas, prices of livestock products rose sharply during 1941. Feed prices, on the other hand, advanced less rapidly—reflecting the large stocks accumulated and the policy of releasing government-owned

grain for feed at moderate prices. The milk-feed price ratio failed to take its usual seasonal downturn in April, May, and June of 1941—in fact, it started upward in April and remained favorable throughout the rest of 1941 and in 1942. From May 1941 until October 1942 the hog-corn price ratio climbed, with few interruptions, to reach the highest point since 1926. The egg-feed price ratio, counter to the usual seasonal trend, was climbing by mid-April of 1941, and was generally favorable through 1942.

Abundant feed and favorable price ratios, backed up by price floors and appeals for increased production, brought a succession of new record highs in output of livestock products. Egg production, compared with a year earlier, was up 6 percent in 1941 and another 16 percent in 1942. Milk production was up 5 percent in 1941 and another 3 percent in 1942. The 1941 fall pig crop was up 17 percent from that of the previous fall; the 1942 spring crop up 24 percent, the 1942 fall crop up another 23 percent.

### **Feed-Grain Output Lagged**

Production of feed grains did not increase as fast as the production of livestock. The carryover of corn dropped from the peak of 688 million bushels on October 1, 1940, to 645 million on October 1, 1941, and to 492 million on October 1, 1942. Despite the all-time record corn crop of 1942, the carryover on October 1, 1943, was down to 373 million bushels. By New Year's day of 1942, the number of grain-consuming animals on farms was only 2 percent below the pre-war record set in 1923. By January 1, 1943, the number was 9 percent above that record, and by January 1, 1944, it was 17 percent above the pre-war record. The supply of corn and oats (carryover plus current year's production) reached a wartime high of 0.52 ton per animal on January 1, 1941, and again in 1942. After that it dropped off to 0.50 on January 1, 1943, and to 0.40 on January 1, 1944.

Continued increases in livestock

production were possible not only because farm animals ate up the feed grain reserves stored up at the beginning of the war plus the record crops of 1942 and 1943, but also because of the other feedstuffs available. Pastures and range land were in unusually good condition; production of high-protein supplements such as soybean, and peanut cake and meal was increasing. Moreover, in the year beginning October 1942, farmers fed 426 million bushels of wheat to livestock as compared with a range of 80 to 180 million between 1930 and 1941. To bolster domestic feed supplies, the United States imported 123 million bushels of wheat, 29 million of oats, and 17 million of barley from Canada between August 1, 1943 and April 6, 1944.

### **Farm Livestock Prices High**

On April 10, 1943, the War Food Administration made an announcement which said among other things that: "Current prices for livestock are above the levels reflecting a proper relationship to the existing wholesale meat ceilings. \* \* \*

"In view of the present feed prospects, hog producers are advised not to increase breeding for 1943 Fall farrowings by more than 15 percent above the 1942 level. \* \* \* An increase of only 5 percent \* \* \* would \* \* \* meet the overall goal of 15 percent increase [spring and fall pig crops combined] in 1943 over 1942.

"The Office of Price Administration is adjusting its [corn price] ceilings in the surplus producing area to allow the maximum seasonal price at this time in order to encourage the immediate resumption of the movement of corn through trade channels. \* \* \*

In the 2 years from April 1941 to April 1943, much had happened. Price floors had been progressively raised. Goals called for successive increases in output of livestock products. Production of milk and eggs had climbed to new records. Although milk production in 1942 was short of the goal, egg production exceeded the

goal and both milk and eggs set new records. Hogs were fed longer, to heavier weights; beef cattle numbers steadily increased. In brief, live-weight production of meat animals on farms was rising rapidly but marketings were short of the goals.

As long as German submarines roamed freely in the Atlantic and until shipbuilding overtook sinkings, Britain, to survive, had to get as much energy food as possible packed into as little space as possible. Hence the emphasis on pork and lard, powdered milk, and powdered eggs.

### 1943 Emphasis Shifted to Feed

But by 1943 the situation had changed. It was becoming more important to conserve shrinking feed supplies than to attempt any further increase in output of concentrated foods to save shipping.

Feed-livestock price ratios generally remained favorable during most of 1943, until Government-owned stocks of corn and wheat for feed, which had been used to hold down feed prices, were nearly exhausted toward the end of the year. Egg production in 1943 was up 12 percent from 1942—overshooting the goal by 4 percent. Meat output, although 8 percent above the preceding year, was still 10 percent short of the 1943 goal. And milk production, under the impact of local feed and labor shortages, was slightly lower than in 1942 and 3 percent below the 1943 goal, in spite of the fact that the milk-feed and butterfat-feed price ratios were favorable most of the year. Livestock numbers on farms January 1, 1944, reached a new record high.

There were plenty of livestock on farms in 1943 but they stayed there instead of coming to market—until the flood of hogs came in at the end of the year; and when the hogs came in they weighed 10 percent more than the average marketed in 1935–39. It was more profitable to feed corn to hogs in the Corn Belt than to sell it to dairy-men in other parts of the country.

In the latter part of 1943, various

steps were taken to retard hog production—and it was announced that the floor price for hogs would be lower after September 30, 1944, when the current commitments expired. By November 1943, the hog-corn ratio was below the 20-year average for the first time in nearly 3 years. In December, the corn ceiling was increased; and in December, farmers planned to reduce the spring pig crop by 16 percent (the goal was a 15-percent reduction). Hogs came in with a rush that glutted the markets temporarily and taxed slaughter capacity for most of the winter.

The egg-feed price ratio also became unfavorable in the latter part of 1943. The 1944 goal called for a 2-percent increase in egg production—and actual production in the first quarter of the year was running 9 percent ahead of a year earlier, because of the open winter and the record number of chickens raised in 1943. Production in April, however, was only 4 percent above production a year earlier and output in the latter part of the year is expected to fall below 1943 levels.

By August 1943 the butterfat-feed price ratio had dropped below the 20-year average, and in September the milk-feed price ratio was very slightly below. The dairy production payments initiated in October 1943 pulled the milk-feed ratio back up above the long-time average, and increased the butterfat-feed ratio although it remained below the 20-year average.

### 1944 Feed-Grain Carryover Small

The volume of grain fed in the October–December quarter of 1943 was greater than the volume fed a year earlier. In the January–March quarter of 1944 it had finally dropped below the volume fed a year earlier. Prospects are that the carryover next October 1 will be the lowest since 1937, in spite of the fact the 1942 corn crop was the largest and the 1943 crop was the second largest in history; and also in spite of the fact that the number of cattle on feed in the Corn Belt April 1



was the smallest in 6 years while marketings of hogs, cattle, and calves in the first 4 months of 1944 were the largest on record for the period. The beef-steer-corn price ratio at Chicago dropped below the 20-year average in December 1943 and was still below in mid-April.

To summarize, demand for livestock products was weak from the outbreak of war in Europe until the spring of 1941, when it was strengthened by the Lend-Lease Act and greater consumption as a result of increasing defense production. Feed supplies were exceptionally large at the start of the war, but despite record crops after 1941 livestock production rapidly outran feed supplies.

The first price supports were announced April 3, 1941, along with a call for increased livestock production, and prices remained favorable to livestock producers until the latter part of 1943. Production of meat animals, milk, and poultry products increased to new records. But dairy product prices in 1943 were not high enough to compete with hog prices and beef

cattle prices in obtaining feed, and milk production declined. Adjustments in price relationships and related measures in the latter part of 1943 and early 1944 made the dairy-feed price ratios more favorable in relation to the others, and halted the decline in milk production.

We have used up the large feed grain reserves accumulated at the start of the war, we have fed far more wheat than usual, and we have imported grain from Canada. But we cannot hope to maintain our numbers of grain-consuming livestock much longer at a level 17 percent above the pre-war record. Goals for 1944 call for all-out crop production—and in order to make the most efficient use of available feed they call for a 2-percent increase in egg production (compared with 1943) a 2-percent increase in milk production and a reduction in meat animal numbers through increased slaughter. Present trends are in the direction of those goals.

FRANKLIN THACKREY  
*Bureau of Agricultural Economics*

## More Milk Goes to Market Whole

A QUARTER of a million dairy farmers have switched from selling farm-separated cream to selling whole milk since the pre-war years 1935-39. Farm sales of whole milk at wholesale increased from about 40 billion pounds in 1935-39 to more than 60 billion pounds in 1943. In the same period the milk equivalent of farm-separated cream sales dropped from 32 to 31 billion pounds. The increase in whole milk sales far outstripped the total gain in farm milk production during this period. The additional milk brought into the market for whole milk since 1935 is about equal to the entire farm marketings of whole milk at wholesale twenty years ago.

War needs, and price relationships resulting from them, have been responsible for accelerating a swing toward using our milk supply more fully.

Output of manufactured dairy products utilizing whole milk—including cheese, evaporated milk and dried skim milk—increased greatly from the 1935-39 average to 1943. Consumption of fluid milk and cream increased by 10 billion pounds during the same period, responding to increased consumer incomes. From the 1935-39 period to 1942 whole milk marketings increased faster than production of whole milk products. Consequently, more skim milk became available in dairy plants. The amount of skim milk used for skim milk products rose from 7.8 billion pounds annually during 1935-39 to 11.3 billion pounds in 1942. In 1943 only 9.0 billion pounds were used for skim milk products because milk used in whole milk products increased faster than whole milk deliveries.

A large part of the additional whole milk came from larger production on farms already selling whole milk. But war needs also reached into the reservoir of skim milk being fed to livestock or wasted. Many farmers who formerly were separating milk and then selling the cream and feeding the skim milk to livestock, are now sending whole milk to market. This shift has been an important war adjustment by the dairy industry. It is possible that some shift back may come at the end of the war even though the gains in marketing whole milk will not all be lost. The facts about the increasing sales of whole milk so far shed some light on probable post-war developments. Much depends on the development of a demand for nonfat milk solids comparable to that for butter.

### **Skim Milk Product Demand**

Condensed skim milk and cottage cheese production and consumption in the United States have increased steadily during the past decade. Casein production also increased irregularly until curtailed by the demand for food products from skim milk. However, production of dried skim milk (nonfat dry milk solids) has increased most sharply, and accounts for most of the increased skim milk use.

Domestic consumption of dried skim milk for human food has increased continuously since 1935. Human food uses took 199 million pounds of dried skim milk in 1935, increasing to over 300 million pounds in 1942. Consumption of animal feed dried skim milk ranged between 116 and 158 million pounds annually during 1935-41, but fell to 60 million pounds in 1942.

The baking industry has been the principal user of dried milk. From 1929 to 1939 the quantity of powdered milk used by bakers more than doubled, increasing from 73 million pounds to 169 million pounds (including possibly 5 to 10 million pounds of dried whole milk). Milk solids are used in amounts up to 3 to 6 percent

of the amount of flour in some bread. General use of the latter amount by commercial bakers would create a demand for more than 500 million pounds of dried skim milk annually—a quantity more than twice as large as the 238 million pounds consumed annually by all users during 1935-39.

In early 1943 Food Distribution Order 1 required bakers to use from 3 to 4 percent of milk or skim milk solids in bread. But it was impossible to maintain sufficient civilian supplies for even the 3-percent level of usage and at present the minimum requirement for milk solids content of bread has been removed. The baking industry will undoubtedly consume new record amounts of dried skim milk when present restrictions can be eased or removed.

Household uses have never taken important quantities of dried skim milk. One of the outstanding challenges to the dairy industry for the post-war period is to develop a market in this field. In the last few years some skim milk powder has been placed on the market in consumer packages, and it is probable that this outlet would have been extensively tested already if the war had not intervened. More extensive home use will probably depend on changes in food preparation habits as well as on availability of skim milk powder in convenient form at low cost.

### **Cream to Whole Milk Sales**

The largest percentage increase of dried skim milk production since the pre-war period was in the West North Central States, where the 1942 production of 103 million pounds was 280 percent of the 1935-39 average. Wholesale sales of whole milk by farmers increased from an average of 2.9 billion pounds to 6.1 billion pounds while the milk equivalent of farm-separated cream sales increased from an average of 18.0 billion pounds during the pre-war years (1935-39) to 19.1 billion pounds in 1943. If the same percentage increase had occurred in both milk and cream sales, the latter

would have amounted to 21.7 billion pounds. Thus, producers of nearly 3 billion pounds of milk appear to have shifted from marketing farm-separated cream to marketing whole milk in this region.

In the East North Central States, 1942 production of dried skim milk was 273 million pounds, an increase of 187 percent over the 1935-39 average. Wholesale sales of whole milk by farmers increased from 16.0 billion pounds to 24.8 billion pounds, while the milk equivalent of farm-separated cream sales declined from 7.1 billion pounds to 4.1 billion pounds. Producers of nearly 5 billion pounds of milk appear to have shifted from marketing farm-separated cream to marketing whole milk in this region.

Outside of the North Central States this sort of shifting appears to have involved about 3 billion pounds of milk while there was a 30 percent increase in the production of dried skim milk.

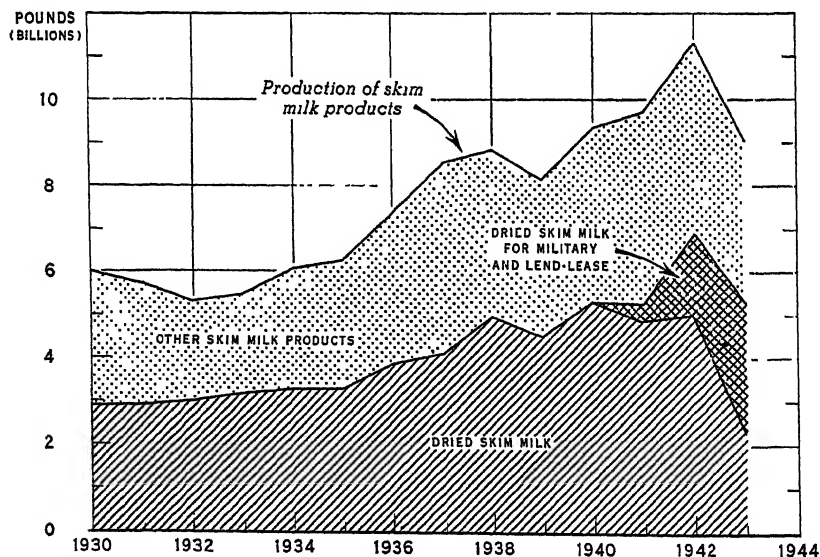
The significance of the shift from cream to milk sales is twofold: (1) It is a result of the increased value of

the nonfat solids in milk because of the war food program; and (2) it is a result of providing facilities for utilizing skim milk for manufactured dairy products in areas where facilities of that sort had not been available. In the East North Central States, a large proportion of the producers of farm separated cream have had access to alternative whole milk markets for many years. They were free to change their method of marketing as relative prices favored selling whole milk, or skimming it and then feeding skim milk. In the West North Central States, however, dairy plants for producing whole and skim milk products were accessible to relatively few dairy-men. Had there been more plants, there probably would have been more whole milk marketed in this region.

#### New Skim Milk Outlets

Total production of dried skim milk during the 1935-39 period averaged 375 million pounds annually. In 1942 it was 627 million pounds, dropping to 478 million pounds in 1943 because supplies of skim milk declined. The

**PRODUCTION OF SKIM MILK PRODUCTS, 1930-43**  
SKIM MILK EQUIVALENT



peak United States production of dried skim milk in 1942 took over 2 billion pounds more skim milk than during 1935-39. The demand for dried skim milk led to the construction of many new dairy plants beginning in 1941, as well as the addition of milk drying equipment to many existing plants that previously bought only farm separated cream. Thus, whole milk outlets were provided for thousands of farmers who formerly had no choice but to feed their skim milk to hogs or waste it.

Throughout the United States, dried skim milk production was reported by an average of 429 plants each year during 1936-40 and by 492 plants in 1942. In the West North Central States the number of plants increased from about 50 during the pre-war years to about 60 in 1941, and to 84 in 1942. A study of drying capacity as of January 1, 1943, showed that, allowing for seasonal variation in supplies, about 1,200 million pounds of dried skim milk could be produced annually. However, many dairy plants that formerly dried some skim milk have recently used their entire milk supplies for whole milk products, and a considerable part of the increased production has come from new plants.

During 1943, the War Food Administration helped to obtain priorities for constructing 107 roller process milk drying plants and 26 spray process plants. Of these, 47 roller plants and 15 spray plants actually were built

and put into operation, mostly in the latter half of 1943. It is expected that the remainder of the plants for which priorities were obtained last year will be put into operation this year. In addition, priorities recently have been granted for an additional number of plants and some of these also may begin production this year.

### **Post-War Possibilities**

Following the war, there is likely to be a larger demand for whole milk. The trends in production of whole and skim milk products were upward before the war. Consumption of dried skim milk for human food especially was increasing sharply. Civilian consumption trends were largely reversed by war needs, which limited civilian supplies. But there is undoubtedly an undercurrent of demand at a level much above the 1935-39 average. Consequently, whole milk sales are likely to continue high, with sales of farm-separated cream continuing to decline.

If there should be a post-war decline in demand for whole milk, there will be strong competition between the newly established and the older whole milk areas. This may cause declining returns for the nonfat solids of milk, with increased sales of farm-separated cream in areas where it would be relatively advantageous to feed skim milk to livestock.

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## **Farms for Soldiers and War Workers**

**I**NQUIRIES from veterans, servicemen, and industrial workers who want to farm now or after the war are being received daily by Government agencies, by farmers and others. Inquiries come from many who want to return to farming, from those located on poor land or in overcrowded rural areas, and from urban residents. Judging from the number of inquiries

and interest displayed, it is likely that the demand for farms after the war will exceed the available opportunities to farm. Since the beginning of the war about 4½ million farm people have gone into the armed services and into industrial and other nonfarm work. Already several thousand men are being released monthly from the armed forces and returning to other work.

People interested in taking up farming are doing more than just writing letters. Many urban workers who know little about farming are buying land, some of it poor land for farming. A recent Associated Press article tells a story that can be duplicated in several areas: "Scores of war workers are purchasing sight unseen, worthless northern Michigan land which will never be suitable for agriculture from land speculators. War workers pay three and four hundred dollars down on a piece of land they have never seen \* \* \* when they finally see the land they find 40 acres of blow sand worth considerably less than the down payment." The public has a responsibility in holding to a minimum such spurious land sales activity since it will be called on to furnish relief to settlers on such land when they get into difficulty.

On the other hand, many farmers at home are buying farms. Some are buying for their sons on the farm—or in service. Or, they buy land to increase their own farm acreage. People also are putting money into land as an investment. Others are buying a place for security and a home for retirement.

#### **Land Values Rising**

Such land buying has affected the farm land market during the past year. The number of voluntary sales of farms in 1943 was higher than in any other year on record—even higher than in 1919. This boom in land has caused the Secretary of Agriculture to caution " \* \* \* the fever of rural land inflation has not only set in but has reached a point of danger in many important agricultural areas."

It is important that a land boom be prevented. Many of the veterans, war workers, and farmers who failed after the last war did so because they paid too much for their land. Many who did not have farms bought during the boom, then demand for farm products fell off rapidly after the war needs were filled. Prices dropped considerably at first and later fell to low levels

during the depression of the 1930's. There were also other reasons for failure, such as: (a) Selection of poor land, (b) too little knowledge of farming, (c) trying to pay for farms in too short a time, (d) too few acres of tillable land, and (e) lack of sufficient equipment and improvements. By proper action now many people can be prevented from making these same mistakes again.

#### **Wartime Crop Expansion**

During this war the acreage of land in harvested crops increased from about 321 million acres in 1939 to 351 million acres in 1943. Just as in the first World War there has been an increase in total harvested crop acreage. Actually farmers are producing more food on about the same acreage they did in 1918, but with less labor. And, in the years ahead they are going to become more efficient. Recently it has been estimated that through adoption of improved practices, farm production could be increased 10 to 12 or more percent in a few years without increasing cropland acreage.

If demand for farm products falls off after the present war similar to that following World War I, all of the 30,-000,000 acre increase may not be needed in crop production for some time. After the last war it was not until 1929 that total harvested crop acreage reached a point as high as the expanded wartime acreage of 1919. This increased acreage came about in the main from the development of new land, chiefly in the Western States. The factors here mentioned and others will directly influence the number of opportunities on the land.

#### **Opportunities on Existing Farms**

Although crop acreage for peace may not be as high as for war, some farm openings occur every year. Many former farm men who are now in service or in war industry can obtain farms by taking over their home farms or can get employment on them. Many others, however, will want to remain in or go into industry or other nonfarm

work, if jobs are available. If farming remains profitable and retirement of older farmers is at a rate usually prevailing in such periods, there will be a considerable number of farms becoming available for sale or rent to new operators in the first few years after the war. Estimates vary as to the possible number of retirements of elderly farmers which may be expected at the close of the war. They range from 100,000 full-time farms with incomes of \$600 or above, to 300,000 farms of all sizes and types operated by owners and full tenants.

Improvement of many existing farms could be accomplished in several areas by clearing some suitable farm land, draining some of the better wet land, and adopting good farm practices, such as liming, fertilizing, and seeding pastures. Many farms now too small could provide full-time profitable operator jobs for these type of improvement. To accomplish this, particularly the land development type of work, will require considerable credit, equipment, and technical aid. Improvement of this type would be chiefly replacement and maintenance of land in existing farms and not a major expansion in either the number of farms or in commercial agricultural production.

#### **Development of New Land**

New land farms could also be developed as needed. However, most new land farms require considerable time and heavy costs for development. For these reasons such lands cannot be considered as providing extensive farm opportunities immediately. Irrigation damage, and clearing of certain areas and return of some military lands to their pre-war agricultural use are also sources of new farms. The development of these lands depends in many instances upon legal authorization and funds for equipment, materials and labor required in carrying on the public works needed to improve the lands. Basic to new land development also is the demand for the land and its products. Generally the land to be

developed first should compare favorably with that already in production.

Recent estimates indicate that about 125,000 to 150,000 new farms could be provided by completing land development projects under way, authorized, or in the planning stage. Some of the major public improvements necessary for land development have been partially constructed in several areas, including the Columbia River Basin, the Central Valley of California, some other Western State areas, and the lower Mississippi Valley. While there are few additional large areas of undeveloped land suitable for farming, there are small areas interspersed in other land in different parts of the country. However, much time, study, and work will be required before such land can be made ready for cultivation.

#### **Action Now Being Taken**

For some time in several States, farmers, together with county agents, have been undertaking to advise and guide returning veterans and others who desire to farm. Some of these county groups have located available farms, openings for farm workers, and obtained data on farm values and other information that will be needed to guide and advise prospective farmers.

Action is now being taken to provide a Nation-wide county committee advisory service to veterans and others who are considering going into farming. County agricultural advisory committees or groups under the leadership of the county agent are being organized to render advisory and educational assistance to veterans and others while looking for farms and getting established. This assistance includes advice on such matters as: (1) The types of farming suitable to the different natural areas within a county, (2) capital required, (3) safe margins of indebtedness, (4) desirable sizes of farms, (5) information on partnership agreements and leasing arrangements, (6) sound operating practices, and similar matters. The membership of

the committees consists mainly of farm people familiar with agricultural conditions in the county, but other private citizens and employees of public agencies who are in a position to contribute to this effort are also eligible for membership. Veterans will be referred to this advisory committee by the reemployment committee of their local selective service boards.

Also, the Department of Agriculture, the State agricultural colleges and experiment stations are providing information on the general business outlook for farming. In several States publications have been, or are being proposed on farm opportunities. This information is being used by those who are planning to go into farming, by the county committees, and by other groups engaged in providing advisory service to veterans from farms who wish to get reestablished in farming.

Other measures are under consideration to aid in the adjustment of agriculture and the establishment of farm people returning from the war. These measures include: (1) Extension of credit for farm purchase, equipment, improvements and land develop-

ment; (2) assistance in improving farms and making them more productive; (3) studies of the land required to produce the needed products; and (4) related means to assist farmers make the adjustment from war to peace.

### Insuring Farm Opportunities

The employment of farmers and other farm workers cannot be viewed separately from industrial employment. If there is full and profitable industrial employment accompanied by complementary foreign trade there is also likely to be fairly full farm employment at fair incomes. The two go together. In short, the double job of redirecting farm land use and employment of farm people requires carefully laid out plans looking ahead to the future. In forming such policies, the estimation of farm product needs for an adequate living, the farm land requirements and the number of farm workers needed, provides a basis for indicating the number of veterans and others who can find full-time paying work on farms.

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## Protein From Soybeans and Peanuts

WARTIME requirements for increased supplies of protein food for military, civilian, lend-lease, and foreign relief purposes early directed attention to the use for human consumption of vegetable proteins of superior quality among which soybeans and peanuts were particularly emphasized. Post-war relief and rehabilitation of the people of occupied countries now presents a tremendous problem and one that will demand an adjustment in our agricultural production after the war. Already starvation and disease from lack of food is commonplace, especially among children. One of the most important shortages is that of protein foods.

Soybeans and peanuts are among the richest known sources of protein in naturally occurring foods. The protein content of soybeans ranges, according to variety, from 30 to 45 percent and when properly processed the protein is of a superior quality. Few, if any, agricultural crops produce more protein food per acre than soybeans. Peanut kernels contain from 25 to 35 percent of high-quality protein, depending on the variety and locality where they are grown. In addition to their valuable protein, soybeans and peanuts are also good sources of essential mineral elements and vitamins. Until recently the

*(Continued on p. 24)*

# Economic Trends Affecting Agriculture

Year and month	Indus- trial production (1935-39 =100) <sup>1</sup>	Income of indus- trial workers (1935-39 =100) <sup>2</sup>	1910-11=100				Index of prices received by farmers (August 1909- July 1914=100)			
			Whole- sale prices of all com- modi- ties <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com- modi- ties	Com- modi- ties, interest, and taxes		Dairy prod- ucts	Poul- try and eggs	Meat ani- mals	All live- stock
1931	75	76	109	122	120	95	101	89	70	84
1933	87	86	117	125	130	103	114	116	116	115
1936	103	100	118	124	123	111	125	114	118	120
1937	113	117	126	131	134	126	130	110	132	127
1938	89	91	115	123	127	125	114	108	115	113
1939	109	105	113	121	125	123	110	95	112	108
1940	125	119	115	122	126	126	119	96	111	112
1941	162	199	127	131	133	151	139	121	146	140
1942	199	235	144	152	151	201	162	151	188	173
1943	229	305	151	167	164	264	193	190	209	200
May	238	302	152	167	163	---	189	175	216	200
June	236	304	152	168	164	---	187	170	213	199
July	240	306	151	168	165	274	189	183	209	198
August	242	312	151	169	165	---	192	192	208	200
September	245	315	151	169	165	---	195	201	208	203
October	247	317	150	170	166	2-0	198	212	204	204
November	247	318	150	171	167	---	202	219	193	201
December	241	316	151	173	169	---	203	212	194	200
1944-January	243	319	151	174	169	275	201	177	194	193
February	244	321	151	175	170	---	201	168	199	194
March	242	318	152	175	170	---	199	162	203	194
April	---	---	152	175	170	202	196	151	203	191
May	---	---	---	175	170	---	194	153	201	190

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops			All crops
1931	91	95	159	97	95	88	95	98	90	70
1935	97	107	174	94	120	82	119	102	109	84
1936	108	102	165	95	112	92	104	107	114	89
1937	120	125	204	90	120	104	110	115	122	91
1938	75	71	170	67	88	70	88	80	97	76
1939	72	69	155	70	90	68	91	80	95	76
1940	84	82	136	77	96	73	111	88	100	79
1941	97	89	159	107	130	85	129	106	124	93
1942	120	111	252	149	172	114	163	142	158	105
1943	144	147	325	160	190	179	215	183	192	117
1943-May	144	144	319	162	187	170	270	187	194	119
June	145	148	320	161	187	196	261	190	195	119
July	148	151	321	153	183	216	220	188	193	117
August	117	152	326	160	196	202	186	183	192	116
September	150	156	315	163	199	205	180	182	193	117
October	167	158	335	164	201	195	187	183	194	117
November	160	158	347	156	202	196	228	187	194	116
December	166	165	349	160	202	208	223	192	196	116
1944-January	170	168	350	162	203	201	267	199	196	116
February	170	169	343	161	205	206	247	196	195	115
March	169	171	351	161	207	215	242	198	190	115
April	171	172	352	163	207	227	220	200	196	115
May	170	173	350	160	208	232	225	198	194	114

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total Income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.



*(Continued from p. 22)*

comparatively small amounts of these seeds produced were used primarily for their oil and the press cake has been long valued as protein concentrates for feeding farm animals.

Soybean and peanut products, in the form of soya flour, grits, flakes, peanut flour, and peanut butter, offer practical and highly efficient sources of superior protein that can be used for human food in a variety of ways at comparatively low cost. Low- to medium-fat soya flours contain from 47 to 52 percent protein, while peanut flour from which most of the fat has been removed contains as much as 55 percent.

At the end of 1943 the capacity for production of soybean flour and grits was about 1,400 million pounds per year and the actual production was at the rate of 400 million pounds. The present soybean consumption for bakers' uses of flour in this country amounts to 80 million pounds per year.

Peanut flour for human consumption is being produced in a limited quantity, but could be turned out on a much larger scale. Because of its limited production this valuable source of plant protein has not been available in sufficient quantity to receive the full recognition it merits.

Soybean and peanut proteins are remarkably effective for supplementing the proteins of wheat. Addition of small proportions (5 to 15 parts) of soybean or peanut flour to wheat flour (95 to 85 parts) produces mixtures from which bread can be made having from two to three times the protein value of bread made from wheat flour alone. This effect is of great significance in relation to post-war relief, since a large part of Europe's diet will consist of wheat from surpluses from Canada, Australia, Argentina, and the United States.

D. BREESE JONES

*Agricultural Research Administration*

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# THE AGRICULTURAL • SITUATION •

JULY 1944

*A Brief Summary of Economic Conditions*

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**C**ROP PRODUCTION this year may equal the near-record 1943 output, according to July 1 forecasts. Acreage harvested may be the greatest yet except for the years 1929-32. Drought in the East and South, however, threatens to reduce yields somewhat. \* \* \* The 1944 wheat crop is estimated at a record-smashing 1.13 billion bushels—the wheat loan rate was raised to 90 percent of parity. Nearly 3 billion bushels of corn is forecast, fifth largest crop in history, together with near-record production of other grains, hay, and tobacco. Deciduous fruit production is expected to be almost a fifth higher than in 1943 while vegetable output is up 10 percent. \* \* \* In contrast, the 1944 cotton acreage is the smallest since 1895 which, together with increased cotton ceiling prices under the Stabilization Extension Act, are chief reasons for the 10-market average price of cotton pushing above 22 cents for the first time since 1928. That Act also increases cotton loans to 92½ percent of parity. \* \* \* The new stabilization law directs the President to use all lawful means to support farm prices of many commodities at full parity or at the highest price received during the first nine months of 1942 adjusted for gross inequities and for seasonal variation.

# Commodity Reviews

## FEED

**T**HE PERIOD of shortest supply of feed grains in relation to demand appears to have passed for the current feeding year ending next September. Although too early in the season to be able to forecast probable total feed-grain production in 1944, indications point to fairly optimistic prospects.

Large increases in livestock and poultry numbers during 1941-43 compared with supplies of feed caused feed reserves to be reduced, notwithstanding the feeding of large quantities of Government wheat in the 1942 and 1943 crop years. Demand for all concentrates has been very strong during 1944. Supplies of feed grains entering commercial channels during recent months have not been of sufficient volume to fully satisfy demand.

Total reserves of corn, oats, and barley at the end of their respective crop years are likely to be little more than half as large as the average for the 1937-41 period, when substantial reserves were accumulated, but the carry-over probably will be about the same as the long-time average.

On July 1 a 302-million bushel crop of barley was in prospect for 1944, about 6 percent less than in 1943, but somewhat more than had been expected earlier this year. June 1 carry-over of barley was 67.6 million bushels, the smallest since 1940, but still considerably above that of drought years when it dropped to as low as 22 million bushels (1935).

The 1944 production of oats is forecast at 1,183 million bushels. A crop this size would be 3½ percent larger than the 1943 production, and 15 percent larger than the 10-year (1933-42) average production. It would be, however, 12 percent smaller than the record crop of 1942.

July 1 prospects point to the fifth largest corn crop on record and,

though it is too early to judge the final outturn, a record 57 percent of the acreage is in hybrid varieties.

A large hay crop is in prospect for 1944, about equal to 1913's large one and exceeded only by the record crop of 1942. Pasture conditions on July 1 were generally favorable, but rain was needed in most of the eastern part of the country.

## United States Feed Balance, 1937-44, Year Beginning October

(In million tons)

	1937-41 average	1913 <sup>1</sup>	1944 <sup>1</sup>
<b>SUPPLY</b>			
Stocks, beginning crop year <sup>2</sup> .....	17.1	16.7	12.0
Feed grain production:			
Corn.....	72.3	86.1	83.5
Oats.....	18.1	18.3	18.9
Barley.....	6.8	7.7	7.2
Grain sorghums.....	2.2	2.9	3.2
Total production.....	99.4	115.0	112.8
Imported grains, domestic wheat and rye fed.....	4.6	14.0	-----
Byproduct feeds.....	16.5	19.9	-----
Total supply.....	137.6	166.2	-----
<b>UTILIZATION</b>			
Feed grains fed (including imports).....	85.4	110.9	-----
Wheat and rye fed (including imports).....	4.4	12.6	-----
Byproduct feeds fed.....	16.5	19.9	-----
Total fed.....	106.3	143.4	-----
Feed grains for food, seed, industry.....	11.9	12.9	-----
Total utilization.....	118.2	156.3	-----
Total utilization adjusted to crop year basis.....	117.5	154.2	-----
Stocks, end crop year <sup>2</sup> .....	20.1	12.0	-----

<sup>1</sup> Preliminary—subject to change as more data become available.

<sup>2</sup> Stocks of corn Oct. 1, oats July 1, barley June 1, sorghum stocks not reported. Includes stocks on farms, at terminal markets, and in CCC bins.

## PIG CROP

**T**HIS year's expected 88 million pig crop will be about a fourth smaller than last year, though the third largest annual crop on record. In 1943 the

crop was 122 million head, and the average for the ten years, 1933-42, was 75 million head.

The 1944 spring crop totaled 56 million head, 24 percent below last year's record of 74 million head, but only 8 percent less than the second largest spring crop in 1942.

On June 1 farmers reported they intend to breed some 50 million sows to farrow this fall, compared with 76 million actually farrowed last fall. Such farrowings would result in a fall pig crop of about 32 million head, assuming that the June breeding intentions are carried and the number of pigs saved per litter is average. This would be 33 percent less than last year's record fall pig crop, and 27 percent less than the near-record one of 1942.

A reduction in the number of pigs to be raised this year has been largely the result of: (1) the least favorable hog-feed price relationships during the past winter and spring since late 1940, (2) a very small supply of feed grains in relation to the number of grain-consuming animals on farms, and (3) an announced reduced support price for hogs in October. In addition, last winter's and spring's market gluts of hogs had considerable influence on the raising of fewer pigs this year. Closely related to the second point above is the fact that for the first time since 1941, current feed production must supply nearly all the needs for animal feeding next year because there are very little reserve supplies left.

Despite this sharp reduction in the pig crop, slaughter supplies of hogs will probably be larger this year than last. Reduced pork production will not begin until this fall.

## CASH RECEIPTS

**T**OTAL receipts from farm marketings for the first half of 1944 are estimated at about 8.65 billion dollars compared with 7.80 billion for the

same period of 1943. Largely because of the record hog and cattle slaughter early this year, marketing receipts for all livestock during the first six months of 1944 were about 580 million dollars more than for the same period in 1943, while receipts for all crops increased about 267 million. Receipts for meat animals were about 486 million dollars higher, dairy products about 110 million more, while poultry and eggs were about 24 million less. Principle increases in receipts from crops were in food grains, feed grains and hay, tobacco, and fruit and nuts.

The accompanying table lists a preliminary forecast of farm marketing receipts by commodity groups for January through June 1944 compared with the revised estimate for the same period in 1943.

**Farm Marketing Receipts for First Half of 1943 and 1944**

Commodity group	January through June 1943 <sup>1</sup>	January through June 1944 <sup>2</sup>	1944 change from 1943
	Million dollars	Million dollars	Million dollars
Crops:			
Food grains.....	199	275	76
Feed grains and hay.....	439	500	61
Cotton and cottonseed.....	267	265	-2
Oil-bearing crops.....	180	170	-10
Tobacco.....	116	150	34
Vegetables.....	667	665	28
Fruit and nuts.....	369	425	56
Total crops.....	2,423	2,660	267
Livestock:			
Meat animals.....	2,784	3,270	486
Dairy products ..	1,890	1,500	110
Poultry and eggs.....	1,104	1,080	-24
Total livestock.....	5,580	5,960	580
Total receipts from marketings.....	7,803	8,650	847

<sup>1</sup> Revised estimate. <sup>2</sup> Preliminary forecast.

## WHEAT

**T**HIS YEAR will see the Nation's largest wheat crop and its second biggest supply of wheat in history, according to July indications. The July crop report estimated a 1,128 million bushel crop for 1944 (93 million above the June indication)

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	187	115
February.....	184	189	116
March.....	192	190	120
April.....	197	192	122
May.....	194	193	119
June.....	195	194	119
July.....	193	195	117
August.....	192	195	116
September.....	193	195	117
October.....	194	195	117
November.....	194	197	116
December.....	196	199	116
<b>1944</b>			
January.....	196	199	116
February.....	195	170	115
March.....	196	170	115
April.....	196	170	115
May.....	194	170	114
June.....	193	170	114

<sup>1</sup> Ratio of prices received to prices paid, interest, and taxes.

consisting of 793 million bushels of winter wheat and 335 million of spring. Weather and other factors, however, could materially change these figures.

The estimated July 1, 1944, carryover of 350 million bushels when added to this crop brings the supply at the beginning of the wheat year to 1,478 million bushels, somewhat more than 1,453 million bushels a year earlier and well above the 1,032 million average for 1933-42. This carryover being 50 million bushels above the May forecast reflects larger imports and somewhat smaller wheat feeding than expected earlier.

Under ordinary conditions such very large supplies would exceed probable disappearance, hence stocks would accumulate. But in the year ahead disappearance is expected to continue to be very large.

Because conditions are now subject to considerable change, greater uncertainty than usual is involved in forecasting distribution. If a July 1, 1945 carryover of 350 million bushels is achieved a total disappearance of about 1,125 million bushels is indicated. Such a disappearance might

be divided as follows, in millions of bushels: food 540, feed and alcohol 375-400, exports 125, and seed 80.

A national 1945 goal of 67 to 70 million acres planted to winter and spring wheat was suggested by the War Food Administrator early in June. This would be above the 67 million acres actually planted for the 1944 crop and the 55 million planted in 1943. The national goal has been submitted to the States for final determination, with the final State goals expected to be announced sometime in July.

## POULTRY AND EGGS

**R**EFLECTING the considerably less favorable egg-feed price relationships this spring, the number of chickens being raised for flock replacements is much smaller than in 1943, and very heavy culling of laying flocks is in progress. On July 1 the number of young chickens on farms was 19 percent smaller than a year earlier; present indications point to 8 to 10 percent fewer layers by January 1, 1945, than on January 1 of this year.

With continued heavy culling of laying flocks in prospect for the next several months and fewer birds raised for replacement purposes, egg production throughout 1944 probably will continue to decline relative to 1943. In the closing months of this year, egg output is likely to be moderately below the record of a year earlier. Increases in egg prices from spring to fall are likely to be greater this year than in 1943, particularly for currently produced eggs.

Wholesale egg prices increased during June as a result of the seasonally declining egg supply in the face of the prevailing strong consumer demand for eggs, supplemented by continued Government purchases for price support. In early July, wholesale prices of eggs at Chicago and New York were 2 to 6 cents per dozen higher than the season's low level of late May, but around 5 cents per dozen lower than

in early July 1943. Prices received by farmers in the United States for eggs in mid-June averaged 28.1 cents per dozen compared with 35.2 cents in June 1943. So far in 1944 the Commodity Credit Corporation has purchased around 6 million cases of shell eggs for price support, in addition to 167 million pounds of dried egg for direct war uses. Because of the tight cooler-storage situation, 128,000 cases of shell eggs have been diverted to animal feed.

## DAIRY PRODUCTS

ALTHOUGH civilian supplies of most dairy products were larger during the April-June quarter because milk production was at its highest seasonal level for the year, it is probable that during the last half of the year civilian supplies of most products will be about the same as during the corresponding period of 1943. Creamery butter production is

expected to be somewhat less in the last half of 1944 as in the corresponding period of last year. American cheese and evaporated milk production may be slightly larger than a year ago. Milk production is likely to follow last year's pattern, which would leave most fluid milk markets in a tight position during the months of lowest production.

Milk production increased irregularly throughout the country during May and early June with marketing facilities in some areas operating at capacity as the seasonal production peak was passed early in June. Total U. S. milk production on farms in June was estimated at 12.5 billion pounds, a less-than-usual seasonal increase from May.

Milk production per cow decreased more than seasonally during June, as compared with a less-than-seasonal decrease in June last year.

July 1 dairy pasture conditions averaged 85.5, compared with 90.4 a

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. A average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		June 1943	May 1944	June 1944	Parity price, June 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushels).....dollars..	0.884	0.837	1.24	1.47	1.43	1.50
Corn (bushel).....do.....	.642	.691	1.06	1.15	1.15	1.09
Oats (bushel).....do.....	.309	3.40	.618	1.709	.788	.676
Rice (bushel).....do.....	.513	.742	1.82	1.78	1.75	1.88
Cotton (pound).....cents.....	12.4	10.29	19.96	19.80	20.16	21.08
Potatoes (bushel).....dollars.....	.607	.717	1.84	1.34	1.25	1.22
Hay (ton).....do.....	11.87	8.87	12.26	10.10	15.00	20.20
Soybeans (bushel).....do.....	2.96	.954	1.73	1.63	1.93	1.63
Peanuts (pound).....cents.....	4.8	3.53	7.01	7.74	7.84	8.16
Apples (bushel).....dollars.....	.96	.90	2.70	3.19	3.14	1.63
Oranges, on tree, per box.....do.....	1.81	1.11	2.59	2.43	2.45	1.97
Hogs (hundredweight).....do.....	7.27	8.38	13.60	12.70	12.60	12.40
Beef cattle (hundredweight).....do.....	5.42	6.58	12.70	12.10	12.00	9.21
Veal calves (hundredweight).....do.....	6.75	7.80	14.20	13.30	13.20	11.50
Lambs (hundredweight).....do.....	5.88	7.79	13.50	13.40	13.20	10.00
Butterfat (pound) <sup>1</sup> .....cents.....	26.3	29.1	49.2	50.7	50.2	40.9
Milk, wholesale (100 pounds) <sup>2</sup> .....dollars.....	1.60	1.81	3.03	3.13	3.10	2.42
Chickens (pounds).....cents.....	11.4	14.9	25.1	24.4	23.8	19.4
Eggs (dozen).....do.....	21.5	21.7	35.2	27.2	28.1	30.0
Wool (pound).....do.....	18.3	23.8	41.3	40.6	42.0	31.1

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable prices computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments since May 1944.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

year earlier and 85.5 for the five-year (1939-43) average for that date. If pasture conditions continue only average for the balance of the season, milk production might decline more rapidly than usual.

To ease the problem of fully utilizing the expected large milk supplies, War Food Administration eased quota restrictions of certain orders. During May and June, milk dealers in markets controlled by WFO 79 were permitted to sell 100 percent as much fluid cream and fluid milk byproducts as in June 1943. In addition, further increases in quotas were granted on a marketwide basis in some markets, and to individual handlers in others where there would otherwise have been unusual difficulty in utilizing milk supplies.

Quotas previously in effect on fluid cream and fluid milk byproducts were 75 percent of sales of these products in June 1943, and the quotas will again be 75 percent after June 30. Quotas on use of milk solids in ice cream were raised from 65 to 75 percent of base period use for May, 85 percent for June, and 75 percent for July.

The permitted milk solids content of ice cream was increased to 24 percent for these three months. Previously, the milk solids content was not permitted to exceed 22 percent, and this limit will again be in effect after July.

## TOBACCO

**D**OMESTIC tobacco production was estimated on July 1 at 1.5 billion pounds, 85 million pounds more than the 1943 production and one of the largest crops since 1939. Despite a late spring, blue mold damage to plant beds, and labor shortages, farmers planted the largest acreage since 1939.

In general, the outlook for tobacco during the next year or so is regarded as favorable in view of the continued strong demand for leaf tobacco. Stocks

of aged tobacco held in this country and in Britain are low in relation to demand, while the supply of United States grown leaf in most of the countries on the European continent and in the Far East are probably nonexistent. It is possible that exports during the next 2 years may increase considerably over present levels.

Chiefly because of the container shortage, production difficulties, and large military requirements, civilian consumption of tobacco products in this country has increased little if any over last year, but the over-all consumption, including the military is probably above the record 1943 level.

The 1944-45 flue-cured tobacco marketing season will begin July 24 with the opening of the Georgia-Florida markets. Demand for the tobacco is expected to be strong and prices favorable. It is expected that the 1944 crop of flue-cured will be placed under a maximum price regulation which will provide for a price differential between tied and untied tobacco.

The 1943 crop of Maryland, now selling, is under price regulation for the first time. Last year's crop of Maryland was one of the smallest on record and of exceptionally poor quality. Prices of better grades of Maryland have been selling at the established ceiling of 62 cents per pound, but partly because of the large percentage of poor-quality leaf, the season's average price to date is below the average of 56 cents for the 1942 crop.

## FRUIT

**W**ITH favorable fruit prospects likely during the 1944-45 season, deciduous fruit production, based on July 1 conditions, will probably be one-fifth larger than the short crop last year and moderately larger than the 1933-42 average. On this date citrus groves appeared in good condition, with indications of another large crop of citrus fruit in 1944-45.

This year's production of cherries, peaches, and pears may be larger than the 1943 crops by 67 percent, 64 percent, and 13 percent, respectively. Apricot production will probably be 3 times larger than last year's small crop. Indications now point to a commercial apple crop considerably larger than in 1943, and a grape crop 10 percent less than last year's record.

Total 1944 peach production of 69,201,000 bushels will probably be the third largest on record, according to July 1 prospects, exceeded only by the 1941 and 1931 crops. Last year's crop was 42,180,000 bushels, and the 10-year (1933-42) average was 57,618,000 bushels. Only Arizona appears likely not to show an increase over the 1943 crop, while indications are that the crops in 27 States will be larger than the 10-year averages.

Slightly over 43 percent of the total United States crop will be supplied by California, where a production of 30,336,000 bushels is expected. This total is second only to the 1930 crop of 34 million bushels. This year's estimated production in California is 20 percent higher than last year's crop and 31 percent above the 10-year average.

Production of California Clingstones, used primarily for canning, is expected to total 18,793,000 bushels or approximately 30 percent more than both the 1943 crop and the 10-year average. The probable 11,543,000 bushel crop of California Freestones is nearly a million bushels more than last year, nearly 3 million larger than the 10-year average, and the largest crop since 1930.

Early peach production of 14,779,000 bushels in 10 States this year is smaller than average, 12 percent less than the 10-year average, but nearly 3 times last year's production.

The season average price per bushel received by farmers for peaches in 1943 was \$2.56 or 72 percent above 1942 prices. Early Rose peaches this year brought \$3.50 per one-half bushel

basket, f o b., for the week ended June 10, as compared with \$3 a year earlier. At the same time Redbird peaches from the Carolinas sold for \$4.42 per one-half bushel on the New York wholesale market, as compared with \$3 68 a year ago.

Ceiling prices for fresh apricots, plums, sweet cherries, and Italian prunes, f. o. b. at country shipping points, became effective June 13. Somewhat lower prices for these fruits than prevailed last season are expected to result from this measure.

## VEGETABLES

ADEQUATE supplies of fresh vegetables are expected this summer. Indications are that planted acreage of total 1944 truck crops for the fresh market will be one-fifth higher than in 1943. Summer truck crop production is expected to be 13 percent higher than in 1943 and 9 percent more than the 10-year (1933-42) average.

Plentiful onion crops are in prospect. Onion production during the late spring and early summer has been estimated at about two-thirds above a year ago. Late summer onion crops may be 33 percent higher than in 1943. Production of cabbage and early summer snap beans will also probably represent an increase over 1943. No significant change is anticipated in summer tomato supplies. Production of early Irish potatoes in the late spring States was estimated on July 1 at 29 million bushels, as compared with 34 million a year earlier. A crop of approximately 18.9 million bushels is expected in the summer producing States, as compared with about 23 million bushels in 1943.

Estimated 1944 truck crop production compared on a percentage basis with 1943 and the 10-year average follows: Late spring cabbage 105 and 82 percent; early summer cabbage 116 and 121; late spring onions 178 and 163; early summer onions 170 and 120; late spring tomatoes 89 and 87; early



summer tomatoes 96 and 113; late spring watermelons 161 and 109; and early summer watermelons 125 and 93 percent.

## FARM LABOR

**T**HIS third summer since the United States entered World War II finds the nation's farmers and ranchers with an even more limited supply of experienced, skilled labor than last year and the year before, but offsetting the shortage to a considerable extent by better utilization of labor and more efficient production practices.

Total farm employment was estimated at 11,285,000 for the first of June, an increase of 12 percent from May 1 compared with a normal rise of 8 percent from May 1 to June 1. Total employment on June 1, however, was 3 percent below a year earlier, due mainly to a 9.5 percent decrease in the number of hired workers, as the number of family workers was only one percent below June 1, 1943. Compared with a year ago, declines

in total employment were shown in all regions except the Pacific.

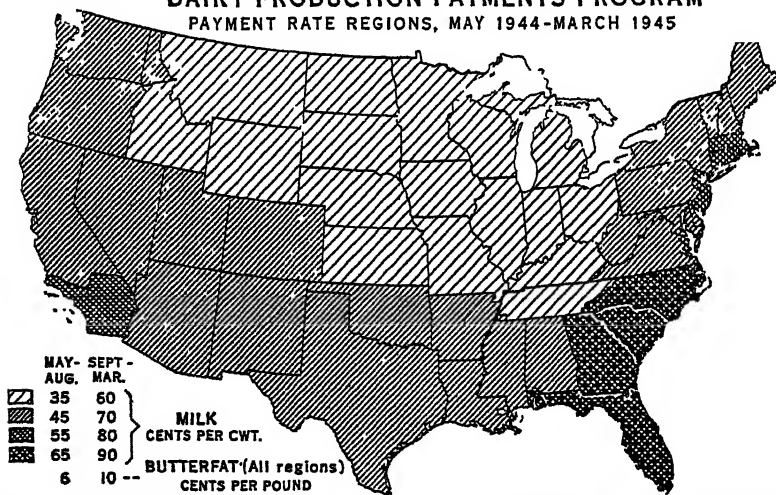
Family labor (including farm operator) totaled 8,845,000 persons on June 1—117,000 under June 1, 1943. Hired help reached 2,440,000 by the first of June compared to 2,697,000 on that date last year. Family labor, including operators and unpaid family workers, composed 78 percent of the total farm labor force on June first.

Labor will continue to be a critical factor in farm and ranch operations through the summer and fall. The drafting of younger farm workers, the administrative difficulties of shifting workers from one area to another, and the fact that housing, working conditions, and wages must compete with those prevailing in war industries all add to the problem.

Steps being taken to alleviate the manpower problem include: (1) continued deferment of farm men who Selective Service boards consider essential to war food and fiber production; (2) increased use of workers from Mexico, Jamaica, the Bahama Islands, Barbados, and Newfoundland; (3) use of all available prisoners of war; (4) intensive community recruiting drives

## DAIRY PRODUCTION PAYMENTS PROGRAM

PAYMENT RATE REGIONS, MAY 1944-MARCH 1945



# Poultry Research Accents Utility

**L**IKE many other immigrants, the modern chicken has found the United States a land of opportunity. Considered in colonial times an inferior game fowl and later often regarded merely as a source of pin money, chickens now are highly esteemed as food and have a respected financial standing. In recent years the value of their eggs, meat, and sundry other products has considerably exceeded a billion dollars annually, and the limits of both the food output and earning power of the Nation's poultry are not yet in sight.

The 934 million chickens raised on farms last year plus the 252 million commercial broilers, if evenly distributed, would have provided every person in the United States with 8 chickens apiece. For a family of 5 persons this would mean a potful of chicken about every 10 days.

The explanation for this rise of the feathered tribe to a high position, both gastronomically and in our national economy, lies only partly in the chicken's inherent biological efficiency. Other important elements responsible for poultry progress have been the business capacity of the American people, their flair for organization, and their support of research work. Substantial evidence bears this out.

## Rags to Riches

True to the theme of success stories, the chicken came from a humble home, the lush jungles of New Guinea, Java, and Malaya, now the scene of Pacific warfare. Learning of these interesting creatures, explorers and colonists carried them to other lands so that poultry raising was well established in the Eastern Hemisphere, including Europe, when settlement of the American Colonies began. Yet within the few hundred years that have elapsed since then—the span of only about 10

human generations—the United States has built up its poultry population until it is now twice that of any other country and probably more than a third of the world's total.

## Large Meat Poundage

Since Pearl Harbor, even in the face of general world food shortages, poultry products have continued to be one of our largest and most dependable food resources. They have simultaneously eased the burden of meat rationing at home and contributed to large food exports. During the spring of 1944, the greatest concern in regard to egg supplies was not to get sufficient production but rather to find enough containers and storage room to keep pace with the hens' shell-filling operations. In meat production, the poultry of this country are now providing a poundage equivalent to nearly half the supply of beef, a third of the pork, and about four times the mutton and lamb produced.

Both in composition and nutritive value, poultry meat, either white or dark, differs little from other lean meats; and the fat of the meat of an average chicken is similar in quantity and distribution to the fat of lean beef. One commendable food habit favorable to the use of poultry is the common inclusion of edible organs—heart, liver, and gizzard—when birds are cooked and served. These nutritionally valuable organs are not usually served with the muscle-tissue cuts of other animals.

Especially in recent years, poultrymen of the United States have concentrated their efforts on developing greater utility value in their birds. Accent on this quality is in contrast to earlier interest in breeding for attractive plumage and other exhibition points, or, as in some parts of the world, in developing strains for cock fighting. In the quest for greater utility value, scientific workers skilled in such fields

as genetics, nutrition, and veterinary science have provided the answers to many problems that have perplexed poultrymen.

### **200-Egg Layers**

Research showing clearly that both egg production and the quality of poultry meat are inherited has led to selective breeding and progeny testing. Largely through use of this knowledge, average yearly egg production per hen in the United States has increased from 86 to 113 in the last quarter century. But 113 eggs is only about half the production of truly superior birds now being raised in mounting numbers. To aid poultrymen in obtaining high-quality breeding stock the Department of Agriculture, in cooperation with 45 States, conducts a National Poultry Improvement Plan. It issues, in connection with that plan, an annual directory of U. S. Register of Merit birds, both male and female, with the names of the breeders. About 3,000 birds have thus far met the specified high standards. They represent blood lines with a capacity for producing upwards of 200 eggs a year per bird.

To help attain wartime production goals, specialists of the Bureau of Animal Industry who administer the plan have sponsored, during the last 2 years, the use of "Victory cockerels" to head hatchery supply flocks. A Victory cockerel signifies production breeding equal or superior to that of U. S. Certified cockerels, which is an advanced breeding stage of the plan. Birds of this quality, now being extensively used, increase the egg production of average flocks about 10 percent. Further poultry breeding studies have disclosed benefits from crossing inbred chickens of different breeds. In a recent test, a combination of inbred Rhode Island Reds and White Leghorns increased annual egg production about 15 percent over that of comparable parent stock.

### **New Feed Sources**

Wartime scarcities of several important poultry feeds have caused in-

tensive search for satisfactory substitutes. Last year this effort established the value of the grain sorghums—yellow milo and hegari—for laying hens. In a well-balanced diet, these feedstuffs proved to have about the same value as corn.

Another line of experimentation was conducted to determine what effect the fat content of the diet of hens might have on the hatchability of their eggs. These studies were prompted by the large quantities of vegetable oils used in poultry feeds as carriers of fat-soluble vitamins. On the other hand, in the preparation of meat scraps and oilseed meals much of the fat and oil originally present is extracted. But even the wide variation of 0.8 to 8.8 percent in the fat content of feeds tested had no effect on hatchability or on the time that embryonic mortality occurred. This research thus removes possible worry on that score.

### **Disease Control**

Activity on the disease-control front has included an intensive drive to conquer pullorum disease. This costly infection, transmitted from parent stock through the egg to chicks, once resulted in high death losses. Modern control consists in blood testing breeding stock and removing reactors to the test. Last year official tests on more than 18 million birds disclosed only 2.43 percent of reactors. This was a record year in both volume of testing and low percentage of affected birds, signifying distinct progress toward eradication.

A further advance toward better poultry health was the discovery by the Bureau of Animal Industry that sulfaguanidine, one of the sulfa drugs, protects chickens against cecal coccidiosis, a parasitic disease highly fatal to birds.

Another discovery gives promise of sharply reducing the waste of millions of pounds of wet-picked chicken and turkey feathers. Normally wet feathers spoil so quickly that they have little commercial value except as fertilizer.

The discovery was a simple, cheap preservative consisting of a weak aqueous solution of hydrochloric acid and salt. Feathers preserved by this method keep for fully a month, even in hot weather, which is sufficient time for them to reach processing plants. Processed feathers find wartime use as filling for sleeping bags, pillows, and coat linings and for soundproofing parts of airplanes.

Although research prompted by war needs has the right of way, the scientists, as they have the time, are gathering and fitting together data likely to be useful in the post-war world. The prospective need for rehabilitating poultry flocks in countries pillaged by

the enemy has aroused interest in the shipment, by airplane, of high-quality hatching eggs and baby chicks.

An ingenious line of scientific research that has already given encouraging results is the "pasteurization" of shell eggs to improve their keeping quality in warm climates, in the absence of refrigeration. The heat treatment is known as "albumen stabilization," and the range of temperatures is lower than cooking heat but higher than that of incubation. A related field of study still largely unexplored is the sterilization of shell eggs for micro-organisms in them.

D. S. BURCH

*Agricultural Research Administration*

## The Cold Storage Situation

IN NORMAL times cold storage space acts as a "shock absorber" for seasonal food surpluses, helping to even out consumption throughout the year. Some months during the year cold-storage space occupancy was high, others low. It averaged about 50 percent of capacity throughout a year, in pre-war days. In contrast, occupancy has been running over 80 percent—often near 90—for the past several months. Such a continued high percentage of occupancy has presented many problems, some anticipated, others not foreseen.

Naturally, the war made necessary a big increase in food production. A third more food was produced in 1943 than the average for the pre-war years 1935-39. And in 1944, with good weather, even more may be produced. Food grain, fruit and vegetable prospects already point in this direction.

Just as any thoughtful housewife buys more food to put in her refrigerator when she expects to feed more people, Uncle Sam is putting more food in his "ice boxes" because he has produced sufficient food to feed about a third more people than before the

war. American civilians eat more—about 6 percent more per capita than in pre-war years. And the average American serviceman eats about a third more than the average civilian. In addition, American food is being sent to our allies, to liberated areas, to friendly nations, and to other special war claimants. Such a feeding program, with many highly specialized needs, has naturally meant full larders up and down the line.

Expected or not, crowding of cold-storage facilities has brought about many problems. In some cases, if events could have been more accurately foreseen, many difficulties could have been alleviated. Other difficulties resulted from very much greater production than expected with the consequent further occupancy of cold-storage space—more than planned. The recent egg storage problem is a good example.

In the beginning it was necessary to build up food reserves from scratch. Besides meeting current consumption needs, a supply had to be accumulated and started on its way through the food pipeline—which accounts for the

sharp increase in storage stocks during the past 15 months. By now, though, reserves are pretty well built up so Government purchases are largely to replace food which has been consumed.

Each day, the Nation uses more food, and therefore each day it must have more than normal storage stocks in order to keep going. Most of the food now in public storage is privately owned. The exact percentage is not available because total military stocks are confidential. But the trade owns the bulk of the fresh and frozen fruits and vegetables in storage, all the cream, more than half of the shell eggs, nearly all the frozen eggs, and most of the frozen poultry and meat. In fact, the only major foods in cold storage held mainly by the Government are butter, cheese, and lard. The War Food Administration holds relatively little pork and almost no beef, lamb, or mutton in public cold storage, though the armed forces have stocks of all these meats in public freezers.

But other factors, most of them concomitants or direct results of war, contribute both to the generally higher level as well as to the peaks and valleys of cold-storage occupancy.

#### **Advance Stocks for Military**

One of these factors is the necessity of having on hand long-range stocks of food for military use. When the housewife has more people to feed, she stocks food for a day or a week, in advance. Food for our soldiers must be stocked for months in advance. Part of that supply is always in transit, part is in warehouses awaiting shipment. To some extent, this is also true of food procurement for our allies and other war programs.

Another factor is the seasonality of production. Food always has been produced seasonally, of course, but now, because more food is being produced than ever before, storage peaks are bound to be higher than usual. Eggs, for instance, have taken up a

great deal of cooler and freezer space this past spring because millions more of them were produced than before the war. Seasonality is important even when production is not up particularly—and even when it has declined. Butter output was smaller last year than before the war, yet butter storage reached a new peak because much more butter is produced in spring and summer than in fall and winter. Accordingly, War Food and the armed forces bought the bulk of their year's requirements during the spring and summer months of heavy production, and ceased buying entirely during the winter. This method of buying not only assured readily available butter supplies for the Government, but also helped make the civilian supply fairly steady the year around. Seasonal butter procurement is being continued this summer.

#### **Food Must be Ready for Ships**

A third factor in the current strain on storage facilities is that out-movements are subject to the fortunes of war. If cargo space does not arrive on time to hold the food which has been brought to port to fill that space, the food piles up inevitably. Two weeks later, on the other hand, cargo ships may be arriving faster than was planned, and great quantities of food will be needed to fill them. Such uncertainty is hard on warehousemen, but it is a military necessity that food wait for ships, not ships for food.

Price support programs also affect the storage situation. To encourage the additional production needed, the Government guaranteed support or floor prices for eggs, potatoes, cheese, and other essential foods, and when more of one of these commodities is grown than is needed, the Government is obligated to buy them at that price if there are no other takers.

So that present cold-storage facilities might go as far as possible toward meeting current demands, several programs for protecting the food in existing space are being carried out.

These programs include: (1) speeding up the processing of products so that they will not require too much refrigerated space; (2) carrying on a vigorous campaign with all warehousemen to get the most effective use of their space; (3) exchanging information among Government agencies through the Inter-Agency Cold Storage Committee; and (4) collecting and releasing to the public complete up-to-date information on space capacity, space occupancy, and commodity holdings.

In addition to these programs, orders have been issued to prevent use of cold-storage space for products which do not need it and to limit the total time any commodity may remain in it. Commodity holders throughout the country who have commodities to

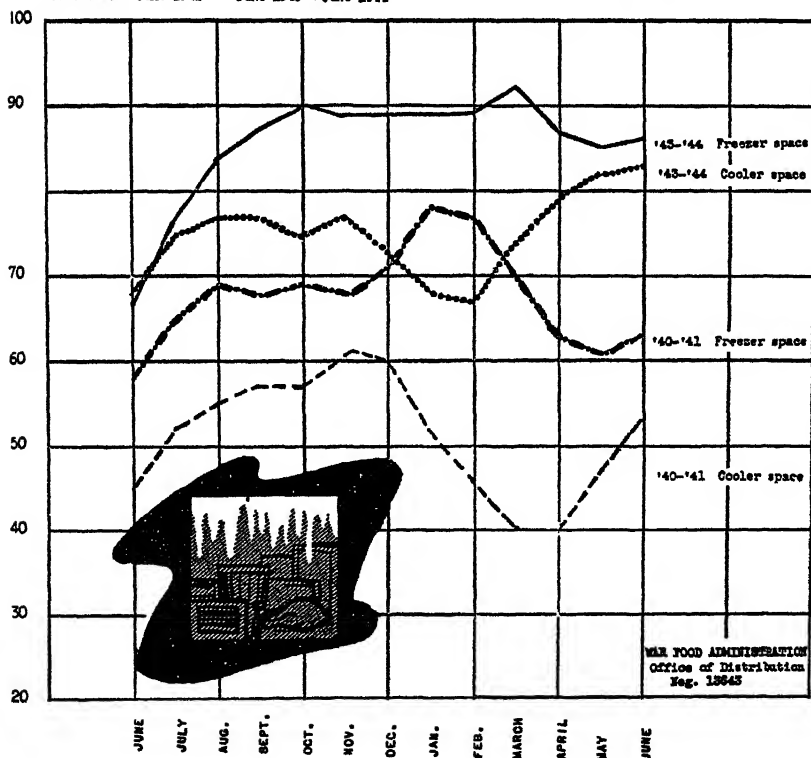
store are kept constantly informed on available refrigerated space so that they will know where to find space. Reservation of empty space for future needs, a practice which kept idle thousands of cubic feet is prohibited. Moreover, excess storage stocks of frozen fruits, vegetables, and poultry have been reduced substantially.

To make the best possible use of available space, warehousemen have been aided in obtaining priorities on materials and machinery which will permit them to use cold-storage rooms as either freezer or cooler space and thus add flexibility to their storage operations and bring about more efficient use of space. Finally, considerable effort has been exerted to bring into use ice-storage facilities and other

#### OCCUPANCY OF REFRIGERATED SPACE IN PUBLIC WAREHOUSES

June 1940 - June 1941

June 1943 - June 1944



types of refrigerated rooms which could be used during emergencies for storing certain types of food.

Because of growing cold-storage requirements, some expansion of facilities in critical areas became necessary. This expansion has been tempered by shortages of many necessary materials and also by the prospect of shrinking post-war demand for warehouse facilities. Construction since June 1941 has amounted to about 3½ million cubic feet of public cooler space and 14½ million feet of public freezer space. It seems clear, however, that even with the best possible management, present storage space will not be adequate in some areas. Therefore, expansion has been planned for future as well as immediate needs in critical areas such as the West Coast around San Francisco Bay, Los Angeles, and Portland; the Dallas-Fort Worth area; the Midwest; and the Southeast around Nashville, Memphis, and Atlanta. Building applications in some of these areas have been received, and expansion of slightly over 6 million cubic feet is in progress.

In the beginning of the Nation's food program, claimant groups for the available supply sometimes over-estimated their future needs. Also, the hazards of war make it necessary for the Government to buy emergency reserves of food for needs which sometimes do not materialize. Such food stocks often are later released to civilians. War Food Administration is constantly reviewing its inventories, and any foods which can be released are being resold in an orderly manner to the civilian trade. These operations not only free storage space now, but also reduce the size of the post-war food problem. Assurances have been given that all Government stocks will be released through the trade and that those manufacturers or packers who originally sold products to the Government will have first chance to buy them back. Moreover, these releases will be timed to avoid seasonal surpluses, temporary gluts, and other price depressing market conditions.

WILLIAM B. WARD  
*War Food Administration*

## Forage Improvement in the Northeast

**H**AY and pasture crops have long been of first importance in the agriculture of the Northeast Region. Dairying has become the leading farm enterprise because of nearby markets and the natural adaptation to forage. But the industry has required considerable quantities of feed concentrates from other areas of the country to supplement home-grown feeds.

Under peace-time conditions, Northeast farmers were able to purchase feed concentrates freely. Now, the national feed situation is tight and inter-regional movement is uncertain. This rapid change has underscored the importance of roughage. If essential milk production is to be maintained or increased in the Region, more hay,

pasture, and silage of higher quality may have to be substituted for much of the concentrates formerly purchased.

### Present Practices Not Intensive

Forage management practices, on most Northeast farms are not intensive. Grass hays form the major part of the winter roughage; fields frequently remain in hay for 5 or more years. Permanent pastures are the main source of summer feed. Brushy and containing chiefly native grasses, these pastures produce poorly except in the spring and early summer.

Here are details for a group of 150 representative farms in Vermont. On the whole, these farmers have a grasp of recommendations for improving

roughage, but few have undertaken improvement practices on their own initiative. All of the lime and 95 percent of the superphosphate used this cropping season was obtained through the AAA. Eight out of every 10 farms used lime and superphosphate and 6 out of 10 used other materials such as mixed fertilizers, nitrates, potash, etc. About 90 percent of all materials was applied on cropland—25 percent received some treatment. In contrast, only 1 percent of the pasture acreage received lime and fertilizer and, in spite of the urgent need, rarely had farmers developed good mid-summer pasture.

### Pilot Farms Show Possibilities

Nevertheless, in the same areas, several farmers have improved their roughage production to a point where the amount of purchased concentrates can be drastically reduced. They demonstrate the possibilities and act as pilot farms in the neighborhood.

Through good cropland management and moderate amounts of lime and fertilizer materials, one operator now has all his cropland in a flexible hay-pasture system. In the spring and early summer, the dairy herd is carried on the permanent pasture. Therefore, this acreage can be limited to that needed during the flush period to carry the herd, and maintenance costs of the permanent pasture are at a minimum. In the meantime, hay is cut from the cropland. The following growth of ladino-grass mixture is then pastured by the herd. Hay is cut whenever the growth is more than the herd can control.

Another farmer has a somewhat different forage program, but one that is nearly as effective. He uses the standard timothy-red clover hay in short rotation and depends upon annual pasture to carry the herd during the mid-summer. One fact stands out in these cases—in both, a definite crop rotation and good care of farm manure goes hand-in-hand with the moderate use of purchased fertilizer materials.

The widespread need for forage improvement can be visualized through a comparison of feed needs and feed supplies on a typical Northeast dairy farm. Points of interest in the comparison are: (1) in May, the nutrient supply exceeds requirements by a wide margin; (2) during July and August, the supply falls considerably short of nutrient needs; (3) feed concentrates, mostly bought, furnish 30 to 40 percent of the nutrient during the winter feeding period and 20 to 35 percent in the pasture period; (4) in only 1 month does home-grown forage supply total nutrient needs.

Normally, these conditions would have important implications for improved management and greater income. Now that feed concentrates may be difficult to obtain in usual quantities, the situation assumes even more importance. If less concentrate is fed without an offsetting increase in roughage, nutrient supplies would be below the requirement level throughout most of the year and milk production would decline.

### More Roughage the Keystone

A roughage improvement program is the keystone of adjustments to increase feed nutrient supplies and maintain milk production in the Northeast. Basic to this end is an effective use of common crops and a few recently developed crops adapted to the area, as well as the increased use of approved methods of crop management on selected areas. Effective use of various crops involves a recognition of the outstanding characteristics of each and the development of a forage program around these points. For example, native bluegrass pastures produce abundantly only for 4 to 6 weeks in the spring and early summer. During this period, permanent pasture should be the mainstay of the pasture program on most farms. Before and after this flush period, other crops should be the main sources of pastureage.

Implications of this procedure are that the acreage of permanent pasture



can be limited to the demand during the flush period. Thus, an improvement program can be confined to a smaller area and land may be freed for other uses. Another case is timothy, a hardy grass that has a definite place in hay production in the Northeast. Where alfalfa cannot be grown or where losses from winter-killing are frequent, timothy or timothy-clover mixtures provide a high-quality hay if cut in the early stages of growth. Using it correctly is the key to good results.

### Steps in Program

Steps of a forage improvement program, long emphasized by state and Federal agricultural agencies, include:

(1) Annual grasses such as winter wheat and rye, oats, sudan grass, and millet used for late fall, early spring, and mid-summer grazing.

(2) Smaller areas of improved permanent pasture mainly for use during late spring and early summer.

(3) Seeded ladino-grass mixture cut for hay or silage during flush period of permanent pastures and grazed during mid and late summer.

(4) Grazing of aftermath when following crop will not be damaged.

(5) Rotation grazing, mowing permanent pasture, and similar management practices.

(6) Early cut timothy-clover hay or silage grown in short rotation.

(7) Early cut grass hay or silage on less easily tilled cropland maintained by frequent top dressing with complete fertilizer or manure fortified with superphosphate.

(8) Alfalfa hay grown on area where the opportunity for success is high.

(9) Hybrid corn silage where sufficient roughage cannot be grown as hay or grass silage or where succulent feed is desired.

Wise care and use of farm manure together with the use of lime and commercial fertilizers is necessary to make many of these steps practical.

It is not too late to step up forage production in the Northeast in 1944. This can be done through the use of nitrogen fertilizer and by increased seedlings of annual crops. These steps are primarily to meet the current need; but, in addition, many can be tied into a sound forage improvement program for the future. All will usually increase net farm income while helping to maintain milk production. Labor requirements will be increased somewhat but, as there is considerable flexibility in timing, the present labor force could usually carry out the practices. New equipment would not be needed on most farms at this time. Eventually, new methods of handling forage will dictate the use of new and different kinds of equipment.

Nitrogen gives a quick boost to plant growth if moisture is sufficient and wider use should prove profitable, particularly during periods of feed shortage. Top-dressing old timothy hayland with 40 to 60 pounds of nitrogen per acre will generally increase yields  $\frac{1}{2}$  to  $\frac{3}{4}$  tons per acre. This, combined with early cutting, will result in more hay of better quality at low cost. Pastures, corn, and small grain generally respond well to applications of nitrates.

### Late Nitrogen Use Feasible

In contrast to most other fertilizers, nitrogen can be applied fairly late in the crop season and still get results during the current year. Aftermath for hay or pasture will be stimulated by top-dressing with nitrogen after the first cutting of hay. Some growth can be encouraged on permanent pastures by applying nitrogen even after the flush period of May and June.

During mid-summer and fall, annual pasture crops can supply a large proportion of the nutrient needs of a dairy herd. Millet or a combination of millet and soybeans can be grazed 3 to 4 weeks after seeding. One acre to 3 cows is usually enough. Oats or sudan grass are two other crops that will help fill in the mid-summer gap in

pasturage. Controlled grazing of oats will not injure seedings; thus, more seeded hayfields or ladino pasture can be available in 1945. Sudan grass is especially valuable in warm weather and usually produces well even when seeded late.

Barley, seeded in mid-summer, will give an excellent pasture crop throughout the fall in most of the Northeast. If more nutrients can be obtained from pasture at this time, the summer grain-feeding schedule can be continued; milk production can be maintained without resorting to winter roughage and more feed concentrates. Rye and wheat seeded in late summer will also provide some pasturage in the fall. What is perhaps more important is that these two crops start growth very early in the spring and are available

for pasture one to two weeks earlier than native grasses.

Immediate adjustments in roughage production should be directed, whenever practical, toward increasing future quality and quantity of forage crops in the Northeast. A well-rounded forage improvement program frequently takes several years to accomplish. More plowing, seeding, and fertilizing done in an emergency can be the first steps in the more intensive and selective use of land resources that makes up such a program. Full utilization of forage as a source of feed nutrients is the basis of a permanent and efficient dairy industry in the Northeast.

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## Agricultural Transportation Outlook

**C**ONTINUATION of war on a global basis throughout 1944, resulting in a total demand for domestic transportation during the second half of the year as great as for the same period in 1943, will mean another tight situation during the peak movement of agricultural products this fall and early winter.

### Railroad Outlook

A small bright spot in the transportation picture is the prospect for some additional railroad equipment so that rail capacity can be gradually expanded in the months ahead. A few more usable locomotives than in 1943 are now available and construction schedules of freight cars indicate a little larger supply in time to help meet the October traffic peak.

From the standpoint of rail capacity, it seems clear that the chief bottleneck will be shortages of manpower in many parts of the country. The rail manpower problem, which is already very serious, is likely to become even more acute this autumn, at least in some areas. The primary need numer-

ically is for laborers, but the shortage of skilled shop workers is perhaps of greater concern because of their key importance in the maintenance of rolling stock and equipment at a high level of efficiency.

An undetermined increase over a year ago in the railroad share of total rail and motortruck traffic is expected this autumn. This will probably be offset in some measure, but not balanced, by a return to the normal water routes along the Atlantic seaboard and the Great Lakes of some traffic which moved by railroad last year.

The distribution of rail traffic in 1943 by six-month periods shows that 52.5 percent of the carloadings were hauled in the last 26 weeks. Approximately 52 percent of the rail ton-miles were also transported in the last 6 months of the year. In the first half of 1944, both carloadings and ton-miles have been running ahead of the same period in 1943. The performance of the railroads in the last half of 1943 must have been very close to capacity, which, owing to the manpower situation, may

not be any greater in the last half of 1944. In fact, for that reason, it may not be as great.

The proportion of railroad ton-miles involving raw and processed agricultural products is probably less than 25 percent of the total ton-miles. Therefore, a substantial increase in the ton-miles for agriculture could mean a relatively small change in the ton-miles for all traffic. Such a change would mean less from the over-all standpoint of manpower and motive power than from the standpoint of car supply, because the whole effect of the change would fall on the special types of cars used for much agricultural traffic, particularly box, stock, and refrigerator cars.

This fact is significant in the case of grain traffic, which uses box cars, because, while the number of box cars is large, only those owned by the western grain roads have been built to satisfy the special requirements of the grain traffic. For these reasons, a change in the volume of agricultural traffic has to be considered separately in terms of the various commodity groups involved. The most important of these groups are grain, livestock, and perishables requiring refrigerator car service.

### **Grains by Rail**

The average turn-around time of grain cars for the season ahead will be reduced because the cars will not be used as much as last year for long-distance shipments of wheat as feed either from Canadian or domestic origins. This change, taken in connection with other prospects for the utilization of wheat, indicates a net reduction of about 200,000,000 bushels in the quantity to be transported from primary markets, including the imports from Canada. As a percentage of the total utilization in 1943-44, including exports, the reduction in traffic referred to will be around 16 percent.

It is quite likely that, with a record crop in sight, the volume of wheat for the whole 1944-45 season shipped

from country points to primary markets will be a great many bushels above what it was for the season in 1943-44. However, it is also likely that a much greater proportion of this season's total movement from country points will be in the months of July to December, inclusive. This means that the railroads serving the wheat-producing areas will be very active in that service during the remaining months of 1944.

On the basis of present information, however, it is reasonable to assume that the production of all grains for feed will be about 2.2 million tons in 1943-44, although it is too early to say definitely what the corn crop will be. If the feeding of animals declines in feed-deficit areas, a decline in rail tonnage greater than in production may be expected.

### **Livestock by Rail**

The peak cattle movement, which ordinarily occurs in October each year, comes at the same time for both rail and motortruck. This peak is caused primarily by the long-distant rail movement of cattle from western ranges to midwestern markets and feedlots. This autumn's rail peak for cattle will undoubtedly be greater than a year ago, while hog movement until October will be as large or larger.

In contrast, current indications are that hog marketings at the peak next winter will be substantially below the record level of a year ago, possibly by as much as 25 percent. If the motortrucks carry a volume approaching that of last year's peak, a significant decline in rail shipments of hogs is to be expected. In any event, it appears that the rails will face their greatest task at the time of the expected October peak in cattle shipments.

### **Fruits, Vegetables by Rail**

The prospects are that there will be little change in fresh vegetables marketings by rail, comparing the last half of 1944 with a year earlier except for a possible shift from motortrucks to

railroads in the eastern market area where shipments of vegetables during the summer and early fall are expected to exceed those of last year. If an indicated 10 to 20 percent reduction in the late potato crop materializes, some savings in the use of refrigerator cars for the fresh vegetable traffic are to be expected. However, a reduction in the number of refrigerator cars requested for potatoes during the period is likely to be more than offset by an increase in the number required for fresh fruits.

Apple production, which was low in the eastern States last year, is expected to be larger this year, and the June crop report indicated that a somewhat better condition is in prospect for apples in the State of Washington. Any increase in the number of refrigerator cars required for apples, particularly from the Pacific Coast area, considered along with the probable increase in the number of cars required for citrus fruits during the last half of 1944, will mean a tight supply of those cars. The increases in traffic cannot be estimated at this time because of uncertainties as to production and the performance of motortrucks. Grapes may require as much rail transportation this year as last, even though production may not be up to the level of a year ago. Fruits other than those mentioned may require somewhat more transportation than last year.

Fresh fruit and vegetable prospects indicate the traffic in the months ahead will exceed that in the last half of 1943, possibly by a substantial margin. The railroads may find it very difficult to meet the demands for refrigerator cars during the peak autumn and winter season. This suggests the advisability of restoring boat service for citrus fruits from Florida to eastern ports, if it is possible to do so.

#### **Cotton, Oil Crops by Rail**

An increase of approximately 5 percent in soybean production may occur, but crushing capacity in the main producing areas has been increased. Consequently, there will be less need

to transport beans from the Corn Belt producing areas to southern mills for crushing. A much smaller flaxseed crop is expected, and the prospect of a slight increase in peanut production is not very important from a transportation standpoint. The production of cottonseed may be less than last year. As the hauls of this commodity are usually short, and are likely to be about the same as last year, the traffic will decline if the expected crop reduction materializes. Cotton manufacturers are not taking as much cotton as they did a year ago and shipments of cotton to mills and ports will probably be no greater than last year.

At this stage in the railroad situation little can be done, apart from what is being done, to meet prospective rail difficulties except that steps should be taken to insure the best possible use of available rail manpower. If the railroads are unable to secure adequate help they will not be able to use their facilities to the best advantage. Shippers of agricultural products, especially wheat, cattle, and fresh fruits and vegetables, are likely to feel the pinch if rail capacity should prove to be short of the needs of the traffic.

#### **Truck Prospects**

Whatever the total tonnage of agricultural products may be during the coming peak marketing season, there will be difficulty in finding an adequate number of motortrucks to haul their normal share of the traffic. A portion of the peak movement of all commodities can accordingly be expected to shift from trucks to rails. The extent to which such a shift may be expected is illustrated by reference to data on the transportation of livestock and fresh fruits and vegetables. Each of these commodity groups relies heavily on motortrucks in the marketing process.

#### **Livestock by Truck**

In livestock marketing, trucks haul a lesser proportion of the traffic in peak than in off-peak seasons. For example, in the marketing of hogs for

1943 44 during the low seasonal period in August, the trucks hauled 68.6 percent of the total receipts at public stockyards. In January 1944, at the height of the hog marketing season, the trucks hauled 63.6 percent of the volume. The same situation also prevailed during the two preceding seasons.

A similar situation prevailed in the marketing of cattle. During the slack month of May 1943, trucks hauled 61.9 percent of the cattle receipts, but at the peak in October 1943, they hauled only 48.8 percent because they do not share in much of the long-distant movement of range cattle. Similar decreases in the proportions of truck receipts of cattle at the peak season occurred in 1941 and 1942.

In terms of absolute tonnage, however, the trucks haul more animals in the peak season than in the off-peak season. In January 1944, for instance, trucks hauled 3,338,000 head of hogs, or more than in any previous month on record. The unprecedented livestock movement of last year by truck was due almost entirely to the record run of hogs.

During the coming livestock marketing season, trucks may not have capacity to handle as many hogs as last season. With an anticipated decline in the total marketing of hogs, it would not be surprising to note an increase in the proportion of hogs going by truck although the absolute volume during the peak season may decline to a substantial extent. Likewise, trucks may not be able to meet all demands for moving cattle from the range to rail loading platforms.

The extremely high peak tonnage of livestock last year was made possible by better utilization of trucks. Even though some decline may be anticipated in the total tonnage, extreme conservation efforts must be practiced next fall to enable truck tonnage to move.

### **Fruits, Vegetables by Truck**

Unlike the livestock movements, truck and rail peaks in the marketing

of fresh fruits and vegetables come at different periods, because of seasonal and geographical differences in production. The peak truck movement of fresh fruits and vegetables occurs in July and August, after which truck receipts exhibit a marked seasonal decline. The peak rail movement comes at two different times, one in May and June and the other in September and October. Concurrently with the July-August peak in the trucking of fresh fruits and vegetables, there is a sharp decline in rail unloads, because truck unloads are derived from producing areas located near the great consuming centers, whereas rail unloads come from large commercial producing areas located at great distances from market. Although some of the peak truck tonnage might be shifted to the railroads, the bulk of this tonnage is greatly dependent upon motortrucks for convenient service.

### **Traffic Peaks Shifted**

Some of the shift in peak traffic referred to has already taken place. During 1943, August truck unloads at 12 large markets declined 10.6 percent below the previous August, whereas rail carloads remained at about the August 1942 level. The fact that rail cars have been loaded heavier would indicate a considerable shift of peak fresh fruit and vegetable traffic from trucks to rails during 1943. This year, vegetable marketings from areas contiguous to the great centers of population are expected to increase materially in July, August, and September. Trucks will not be able to handle much, if any, of this increase, since during the peak in August last year, truck shipments declined 10.6 percent from the year before at 12 leading markets. It seems likely that the dwindling supply of trucks will be inadequate to handle the expected load.

A large crop of apples in the eastern producing area is expected to complicate the trucking problem in the fall of 1944. Production in Virginia will

be about twice that of last year and considerably above the 1934-42 average. While the seasonal decline in the summer vegetable marketing may release some trucks for the apple traffic, a great amount of the excess production in Virginia must go to market by railroad.

All agricultural products dependent on motortruck service can be expected to face many difficulties during the coming marketing season. Shortages

of equipment, replacement parts, drivers, and mechanics will undoubtedly curtail truck service in many areas. Such difficulties will be experienced by shippers of cotton, coarse grains, and other farm products, for which available data do not permit analyses similar to those presented for livestock and fresh fruits and vegetables.

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## A Rural-Urban Community Plans Ahead

THE WAR has brought "good-times" to rural America. The high level of non-farm employment at good wages, together with military and other Government demands, have provided farmers and businessmen with good markets at favorable prices. Many communities, however, are becoming concerned about the problems that lie ahead as war production declines. They remember the period of unemployment, declining markets and lower prices following the prosperity of the last war. Farmers now appreciate more fully what full employment in cities and towns means to them. Some communities are beginning now to plan toward meeting these future problems with constructive action. Fort Smith, Ark., is one agricultural community that is making plans now. Here farmers, businessmen, working groups, public officials, and others are working together to meet the problems ahead.

### The Community

Fort Smith, a town of 40,000 civilian population on the western border of Arkansas, is located on the Arkansas River and serves as the wholesale trade center for a large agricultural area in Arkansas and Oklahoma. During the present war-training program nearby Camp Chaffee was constructed on 70,000 acres, most of which was formerly in farms. The population in Fort Smith has increased during the war even though it has decreased for the trade

area as a whole. This increase has been due in large part to the amount of civilian employment required to construct and maintain Camp Chaffee as well as to an estimated 3,000 officers and men stationed there who maintain homes in Fort Smith.

In addition to the various industries usually found in connection with the wholesale business in a center of its size, Fort Smith has seven furniture factories, three glass factories, one zinc smelter, and one scissors factory. There are no war industries, though a few firms have war contracts such as one furniture factory making shell boxes. There will be fewer problems of converting to peacetime operations after the war than in other communities.

Farmers, businessmen, working people, and others in Fort Smith recognize the major post-war problem to be the maintenance of full employment at useful work for all who want jobs. In the past there have been more people living on farms in the area than could be fully employed at farming. A large number of people who have left the area to enter military service or work in war production centers will return to seek jobs.

### Facts Before Plans

Before making specific plans as to what could be done toward expanding employment opportunities in the area, it was agreed that reliable facts about the locality were necessary. Surveys were made to collect current ideas,

data, and other information which would serve as a basis for intelligent planning. The planning efforts in Fort Smith were initiated by the Post-War Planning Committee of the Chamber of Commerce which enlisted the participation of other groups. Farmers, businessmen, working people, schools, and others were asked to contribute information and ideas and participate in developing various plans. The University of Arkansas and the United States Department of Agriculture are two of several "outside" agencies which assisted local people in the collection of this information.

#### **What Surveys Show**

Indications point to a larger number of both men and women desiring non-farm employment than before the war. There has been very little change in the number of persons employed in manufacturing and commerce in Fort Smith during the war. Employers' present estimates of labor requirements after the war indicate an increase in non-farm job opportunities.

Farm and town families indicated their intentions to buy items in a selected list of consumer goods as compared with their purchases of these items before the war. This comparison gave some indication of the pattern of consumer expenditures after the war. The pattern of post-war spending will serve two purposes: (1) it will offer a guide to businessmen in adjusting to a peacetime business; (2) it will provide a basis for revising estimates of prospective employment opportunities.

A public works committee, composed of businessmen and public officials, studied public improvements needed in Fort Smith and the area immediately surrounding. Projects, such as improvement of streets, schools, water and sewer systems, calling for the expenditure of public funds, were listed in order of need with consideration given to the prospects of funds available.

A financial analysis of the area by the Federal Reserve Bank of St. Louis

gives a very optimistic picture for the area. The financial condition of business and governmental units has improved in recent years. Cash savings held by private individuals promise to be at high levels at the end of the war. These capital resources can be put to work providing more opportunities for productive employment in the area.

#### **Further Studies**

These preliminary studies suggest among other things matters needing further study of a more intensive nature. Such further studies will be directed toward specific opportunities for expanding existing enterprises or establishing new ones. A major consideration will be farm products of the area as a source of raw material for industries which might be located in the area. Considerable amounts of fruits and vegetables are produced both for processing in the area and for fresh market. Further development of food preservation techniques, such as quick freezing, will provide farmers with a more dependable market. Such perishables as strawberries which must now reach retail markets within a matter of hours after harvest can, with quick freezing, be marketed over a longer season. A quick-freeze plant is being set up in connection with one of the ice plants in Fort Smith. This plant will freeze quantities of the various fruits and vegetables produced in the area and prepare for shipping to retail markets. Inquiries are being made as to the possibility of setting up quick-freeze units for the commercial processing of fruits and vegetables in other parts of the area.

Forest products are also an important source of raw materials in the area. At present, wood is going into such uses as railroad ties which would yield greater return as mill wood for furniture and handles. The problem of wood waste from the furniture factories located in Fort Smith is receiving further study. Those wastes which are being burned as fuel by some

factories, while others are making no use of them, are being studied as a possible raw material for some new enterprise.

Besides the resources of raw materials, labor, and capital which have been mentioned, other factors must be considered in expanding existing enterprises or establishment of new ones. New techniques are in constant process of development. Quick freezing is opening up new opportunities in the marketing of fruits and vegetables. Air transport of perishable foods has many possibilities. Markets, both local and more distant, for possible products, along with the comparative advantages of competing areas in relation to resources, markets and transportation costs, are also being considered.

In the rural areas many opportunities exist for small enterprises ranging from a small sawmill operated by a farmer in conjunction with his farming enterprise to a creamery or cheese factory operating the year round as a cooperative enterprise or owned by one or two persons. The development of these small-scale enterprises will be influenced to no small extent by making electric power available to these areas. The development of industries along existing or proposed electric lines will make possible the further extension of electric service to rural areas. This complementary relationship of farm and industry electrification is very important. Cheap electric power available to farmers will make possible the use of electric cream separators, water pumps, refrigeration, and a host of other appliances for the farm and dwelling; thus making every farm so equipped virtually a small industrial plant.

Technical experts from public agencies have visited Fort Smith to discuss the possibilities of various types of new enterprise. Among them were a textile manufacturing specialist, and a specialist on forestry and forest products.

The studies outlined here provide

an inventory of the local resources and the feasibility of further development. With this information the community is ready to look toward the setting up of specific plants or other facilities. The information can be made available to concerns who might be interested in establishing a branch in the locality or some individual or group of individuals in the community who might wish to set up an enterprise using local capital and local management. The community will assume the final responsibility of securing such enterprises.

### Similar Efforts Elsewhere

Similar planning efforts are going forward in other communities throughout the country. Interest in such planning will, no doubt, increase as the end of the war draws nearer.

Communities undertaking these studies will find technical assistance very helpful in gathering information on engineering and economic problems. The United States Department of Agriculture is attempting to organize such technical information so that it can be brought to focus on communities wanting it. Many public and private organizations, such as Federal agencies, certain departments of State governments, local officials, chambers of commerce, trade associations, labor unions, educational institutions, and the Committee for Economic Development, are cooperating with agricultural agencies and organizations in aiding such local studies.

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*Redirecting World Agricultural Production and Trade Toward Better Nutrition.* F. F. Elliott. Processed. 17 pp. Bureau of Agricultural Economics. Washington. March 1944.

Analyzes problem of achieving better nutrition as recommended by United Nations Conference on Food and Agriculture held in Hot Springs in May 1943 and by Conference on Relief and Rehabilitation held at Atlantic City in November 1943.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities, interest, and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1934	75	76	109	122	129	95	101	89	70	8
1935	87	86	117	125	130	103	114	116	116	11
1936	103	100	118	124	128	111	125	114	118	12
1937	113	117	126	131	134	126	130	110	132	12
1938	89	91	115	123	127	125	114	108	115	11
1939	109	105	113	121	125	123	110	95	112	10
1940	125	119	115	122	126	120	119	96	111	11
1941	162	169	127	131	133	154	130	121	146	14
1942	199	238	144	152	151	201	162	151	188	17
1943	239	305	151	167	164	264	193	190	209	20
1943-June	236	304	152	168	164		187	179	213	19
July	240	306	151	169	165	274	189	183	209	18
August	242	312	151	169	165		192	192	208	20
September	245	315	151	169	165		195	201	208	20
October	247	317	150	170	166	280	198	212	204	20
November	247	318	150	171	167		202	219	193	20
December	241	316	151	173	169		203	212	194	20
1944-January	243	319	151	174	169	275	201	177	194	19
February	244	321	151	175	170		201	168	199	19
March	241	318	152	175	170		199	162	203	19
April	244	313	152	175	170	292	196	151	203	19
May	237		152	175	170		194	153	201	19
June				175	170		192	154	200	18

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and livestock	Parity ratio
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934	91	95	159	97	95	88	95	98	90	70
1935	97	107	174	94	120	82	119	102	109	84
1936	108	102	165	95	112	92	104	107	114	89
1937	120	125	204	90	120	104	110	115	122	91
1938	75	71	176	87	88	70	88	80	97	76
1939	72	69	155	70	90	68	91	80	95	76
1940	84	82	136	77	96	73	111	88	100	79
1941	97	89	169	107	130	85	129	106	124	93
1942	120	111	252	149	172	114	163	142	159	106
1943	148	147	325	180	190	179	245	183	192	117
1943-June	145	148	320	181	187	196	261	190	197	119
July	148	151	321	188	183	216	220	188	193	117
August	147	152	326	190	196	202	186	181	192	116
September	150	150	315	183	199	205	180	182	193	117
October	157	158	335	194	201	198	187	183	194	117
November	160	158	347	193	202	196	228	187	194	116
December	166	165	349	180	202	208	223	192	196	116
1944-January	170	168	350	182	203	204	267	199	196	116
February	170	169	348	181	205	206	247	196	195	115
March	169	171	351	181	207	215	242	198	196	115
April	171	172	352	183	207	237	220	200	196	115
May	170	173	350	180	208	232	225	198	194	114
June	165	170	350	183	210	228	231	197	198	114

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total Income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

SEPTEMBER 1944

*A Brief Summary of Economic Conditions*

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WITH FOOD PRODUCTION this year now estimated at 5 percent above last year's record output and 38 percent above the average for the five pre-war years of 1935-39—a remarkable achievement by American farmers—civilian food supply prospects are reasonably good for the balance of 1944 and early 1945. In fact, per capita civilian food consumption for all of 1944 will be a little more than in 1943 and 7 percent above the 1935-39 average. \* \* \* Upturns in livestock prices, especially hogs, more than offset declines in crop prices and raised the mid-August index of prices received by farmers to 193 percent of the 1909-14 average, making it the highest August level since 1920. Considerably higher hog prices together with unchanged corn prices brought the hog-corn ratio from 10.9 in mid-July to 11.5 in mid-August. \* \* \* Agriculture Secretary Wickard, War Food Administrator Jones, BAE Chief Tolley and many other farm leaders look for a continuation of a high level of agricultural output after the war PROVIDED we have full employment. Tolley believes that farm thinking "should lead to an absolute insistence on full industrial employment" to assure a good demand for the products of agriculture and avoid the stop and go production of the past.

# Commodity Reviews

## FOOD SUPPLIES

THE OVER-ALL civilian food situation will be comparatively good for the rest of 1944. Civilian supplies of most foods have been quite liberal all spring and summer, but butter, evaporated milk, pork, and citrus fruits are now becoming less plentiful. Pork and citrus fruits will increase seasonally later in the year. Considerably less butter and other manufactured dairy products, lamb, canned fruits and vegetables, and less of the better grades of beef will be available during the next few months than would be consumed if civilian purchases were not limited under rationing. However, available supplies of these foods, except the better grades of beef, are not expected to be much below those of the last few months of 1943. Fresh fruits and perhaps fresh vegetables will be more plentiful than last year.

Comparison of the estimated per capita consumption of the various foods in 1944 with that in 1943 reveals that civilians are consuming a little less poultry, canned fruits, and vegetables; about the same quantities of eggs, food fats and oils, dairy products, and grain products; more meats, fresh fruits and vegetables, than they did in 1943.

Civilian per capita meat supplies for the last half of 1944 may be somewhat below the rate of consumption in the first 6 months. The expected reduction in meat supplies for the rest of 1944 will result from a small reduction in meat production and increased noncivilian takings.

Supplies of most dairy products will also be less in coming months as production decreases seasonally. There will be less butter for civilians in the July-September quarter and perhaps still less in the last quarter of 1944. A relatively good supply of other fats and oils will be available for the rest of 1944.

Poultry supplies probably will be seasonally large in the next few months, much above average but somewhat below the very high level reached in the corresponding months of 1943. Egg supplies will also be above normal, but they will be reduced from the abundance of the past few months by greater than seasonal decreases in production.

While the supply of fresh fruit and vegetables during the coming months will be fairly large, the supply of canned goods for civilian consumption in 1944-45 may be little less than in 1943-44 because of increased non-civilian requirements in spite of a larger pack. However, the civilian consumption of commercially produced and canned fruits and vegetables will be supplemented by town and city garden produce together with home-canned supplies.

Utilization of wheat for food, seed, and industrial alcohol is expected to be

Civilian Consumption of Principal Foods,  
Calendar Years, 1935-39 Average,  
1943 and 1944

Food item	Consumption per capita in pounds		
	1935-39 average	1943	1944 preliminary
Red meats . . . . .	126	137	143
Poultry meats . . . . .	21	31	27
Eggs <sup>1</sup> . . . . .	298	343	345
Fluid milk and cream . . . . .	340	403	411
Cheese . . . . .	5.5	5.1	4.9
Butter . . . . .	16.7	11.9	12.0
Fats and oils <sup>2</sup> . . . . .	31	34	34
Fresh fruits . . . . .	138	119	143
Processed fruits <sup>3</sup> . . . . .	25	24	24
Fresh vegetables . . . . .	235	233	248
Processed vegetables <sup>3</sup> . . . . .	32	32	32
Potatoes and sweet- potatoes <sup>4</sup> . . . . .	154	161	140
Sugar . . . . .	97	80	81
Corn products . . . . .	39	44	43
Wheat flour . . . . .	154	159	160
Coffee . . . . .	14	13	16
Tea . . . . .	.7	.5	.6
Cocoa . . . . .	4.4	2.9	3.5

<sup>1</sup> Numbers, not pounds.

<sup>2</sup> Excludes butter.

<sup>3</sup> Pack year.

<sup>4</sup> July 1 year for potatoes, crop year for sweet-potatoes.

about the same as in the year just past. Sufficient quantities of rye and rice will be available for food use in 1944-45.

## COTTON

THE 1944 cotton production, according to the August cotton report, is estimated at slightly more than 11 million bales, compared with about 11.4 million bales in 1943. This production will be from the smallest harvested acreage since 1895. But yields are unusually good this year, being 10 pounds per acre more than last year and 37 pounds more than the 1933-42 average.

With a carry-over of about 10.6 million bales on August 1 added to this year's production, the supply for the 1944-45 season is now indicated to be about 21.4 million bales of domestic cotton compared with about 21.8 million bales for the 1943-44 season.

On the basis of average consumption during the season just past, the 1944-45 indicated supply represents about 26 months' domestic consumption, 6 months' more supply than last season. This increase is entirely attributable to the decline in domestic consumption last season because this season's supply is actually smaller.

Domestic consumption of all kinds of cotton last season totaled only 9,942,070 bales, and while it was well over the pre-war high of nearly 8 million bales it was 11 percent under the 11,170,106-bale record established in 1941-42.

During the first 29 days of August, the 10-market price of Middling  $1\frac{1}{8}$ -inch cotton averaged 21.40 cents per pound. This was nearly  $\frac{1}{4}$  cent lower than the average for July and nearly one cent higher than during August, 1943.

## TOBACCO

IN GENERAL the tobacco outlook for at least another year or so is favorable, in view of the continued strong demand for leaf tobacco and

the high level of consumption of tobacco products, particularly cigarettes. Inasmuch as tobacco is habit-forming and the trend in per capita consumption is upward the all-time consumption record established last year has marked significance for the future of the industry.

Stocks of aged tobacco held in this country and Britain are below normal in relation to demand, while there is probably little if any United States grown leaf on the European continent and in the Far East. In view of the depleted stocks and probable post-war demand, exports during the years immediately following the war should be large, but the exact level will depend on a number of factors such as the nature and extent of relief given Allied and friendly nations, international monetary and credit policies, trade agreements, and the extent of the preferences given British Empire grown tobacco.

Present prospects point to a 1944 domestic crop of 1,616 million pounds, compared with 1,399 in 1943 and a 10-year average (1933-42) of 1,389 million. This year's flue-cured crop is now placed at 984 million pounds, second only to 1939 when 1,171 million pounds were produced. This year's burley crop is expected to be 402 million pounds compared with 390 last year.

The season average price paid growers for flue-cured on the Georgia and Florida markets was 36 cents per pound, compared with the established ceiling price of 39 cents for untied tobacco. The average price for untied tobacco (types 11-13) sold so far this season is slightly below the 1944 ceiling of 43 $\frac{1}{2}$  cents. Most of the 1943 crop of Maryland has been sold at an average of 46 cents compared with 56 cents last year.

## WOOL

SHORN WOOL production in 1944 is estimated at 355 million pounds, compared with 384 million pounds

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	156	116
February.....	184	158	116
March.....	192	159	121
April.....	197	160	123
May.....	194	162	120
June.....	195	163	120
July.....	193	164	118
August.....	192	164	117
September.....	193	164	116
October.....	194	165	118
November.....	194	166	117
December.....	196	167	117
<b>1944</b>			
January.....	196	168	117
February.....	195	169	115
March.....	196	169	116
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

last year, and a 1938-42 average of 376 million pounds. The year's clip is expected to be the smallest since 1936.

Because of the smaller production, farm income from shorn wool will be materially below last year's record income of 160 million dollars. The average price paid to growers this year will probably not differ much from the 1943 average of 41.6 cents a pound. Prices in mid-August 1944 averaged 41.7 cents a pound, compared with 40.9 cents a year earlier.

Production in the Western Range Sheep States, consisting of the 11 Western States, Texas, and South Dakota, is estimated at 257 million pounds, a decrease of 17 million pounds from 1943. Wool production was smaller than last year in each of these States except Texas.

In the "native" or "fleece" wool States, which include the North and South Central States (except Texas and South Dakota), and the North and South Atlantic States, the estimated production this year is 98 million pounds, compared with 110 million pounds last year.

## DAIRY PRODUCTS

**M**ILK production on farms for the first 7 months of this year totaled 73.3 billion pounds, about the same as last year. Although production for the rest of the year is expected to be about the same as in 1943, some shifts in utilization probably will take place with more milk going into American cheddar cheese, evaporated milk, and dried whole milk production, and less in butter. Marketings of fluid milk, fluid cream, and milk byproducts probably will not change much from the previous year.

Prices received by farmers in mid-August for milk sold at wholesale and butterfat were 6 cents and  $\frac{3}{4}$  cent, respectively, above that of the previous August. The dairy production payments accompanying these prices received by farmers and returns to dairy farms were at the highest mid-August level since 1919. It is expected that such returns will continue at relatively high levels.

According to a report based on returns from 140 thousand farmers, estimates show that milk cow numbers increased 2 percent from mid-1943 to mid-1944. More than average increases were reported for the North Atlantic and North Central States, while little change was noted in the area west of the Mississippi River. The number of heifer calves being saved for milk cows appeared to be the smallest number since 1940. The decline in the number of heifer calves saved compared with a year ago was general over the entire country.

## POULTRY AND EGGS

**D**ESPITE a 1944 turkey production of 35 million birds, or 500 million pounds dressed weight, 7 to 10 percent above the 1943 output, civilian supplies are expected to be a little less than last year because of increased military requirements. Under War Food Order 106, effective July 17, all turkeys produced and marketed in

designated areas must be set aside until military requirements are met. Potential civilian demand will probably exceed available supplies, with prices expected to remain at ceiling levels.

Chicken marketings for civilian consumption are now seasonally large but by the end of the year civilian supplies will be smaller than they were in 1943. This coupled with smaller fall and winter civilian supplies of red meats than a year earlier is likely to result in a strong demand for poultry, with dressed poultry prices at or close to ceilings. However, manpower and transportation difficulties may cause a decline in poultry prices below ceiling levels in some areas from time to time.

Largest cold-storage holdings of shell eggs on August 1 since 1930 will probably make available for civilians ample supplies of grade B and C eggs for the balance of the year. However, during the next four months egg production might be smaller than last year. High consumer incomes will stimulate a strong demand for top

grade eggs which will keep prices for these eggs at or near ceiling levels and near or above parity levels.

## LIVESTOCK

**T**HE August 1 number of cattle on feed in 11 Corn Belt States was down 41 percent from a year earlier—an estimated 700,000 fewer—the smallest number on feed on that date since 1937. Cattle feeders reported 42 percent fewer cattle than a year earlier that had been grain fed for over 7 months. Marketings of fed cattle in this area in August–October may not be over 50 percent as large as marketings in the same period last year.

Shipments of stocker and feeder cattle to the Corn Belt during the first 5 months of this year were 31 percent smaller than in the same period of 1943. However, during June and July shipments were up 45 percent from the same period last year. Relatively more favorable feeding

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average or reports covering the United States weighted according to relative importance of district and State

	5-year average		Aug. 1943	July 1944	Aug. 1944	Parity price Aug. 1944
	August 1909-July 1914	January 1935-De- cember 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.27	1.39	1.35	1.50
Corn (bushel).....do.....	.642	.691	1.09	1.17	1.17	1.09
Oats (bushel).....do.....	.399	.340	.652	.704	.708	.678
Rice (bushel).....do.....	.613	.742	1.64	1.75	1.71	1.88
Cotton (pound).....cents..	12.4	10.29	19.81	20.32	20.15	21.08
Potatoes (bushel).....dollars..	.697	.717	1.37	1.35	1.59	1.23
Hay (ton).....do.....	11.87	8.87	12.20	13.90	14.30	20.20
Soybeans (bushel).....do.....	4.95	.654	1.68	1.91	1.90	1.63
Peanuts (pound).....cents..	4.8	3.55	7.17	7.75	7.64	8.16
Apples (bushel).....dollars..	.98	.90	2.15	2.63	2.12	1.68
Oranges, on tree, per box.....do	1.81	1.11	2.75	2.94	3.01	1.99
Hogs (hundredweight).....do	7.27	8.38	13.70	12.70	13.50	12.40
Beef cattle (hundredweight).....do	5.42	6.58	12.00	11.70	11.70	9.21
Veal calves (hundredweight).....do	6.75	7.80	13.60	13.00	12.90	11.80
Lambs (hundredweight).....do	5.88	7.79	12.80	12.70	12.30	10.00
Butterfat (pound).....cents..	26.3	29.1	49.8	50.2	50.2	42.5
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.16	3.15	3.22	2.67
Chickens (pounds).....cents..	11.4	14.9	25.6	24.2	24.1	19.4
Eggs (dozen).....do.....	21.5	21.7	38.8	31.2	33.6	36.2
Wool (pound).....do.....	18.8	23.8	40.9	42.7	41.7	31.1

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county A. A. A. Office.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

margins this summer than average have fostered the movement of cattle to feed lots, and if these favorable margins continue, the cattle-price situation will favor cattle feeding this fall. With the prospect for fewer fed cattle to be marketed before the end of the year, prices for fed cattle are expected to continue at a high level. With larger marketings of grass cattle this fall than last in prospect, prices for feeder cattle will probably continue lower than last year.

Calf slaughter continues at a very high level. July slaughter in federally inspected plants was an all-time record for the month, exceeding that of last July by 90 percent in comparable plants and in July 1934, the previous record, by 9 percent. A large slaughter this year reflects the saving of fewer dairy and beef calves for herd replacements and the limited outlet of calves for feeding because of high feed costs and uncertainties as to the long-time price outlook for cattle.

Pork production in October-December may be as much as 20 percent smaller than in the same period a year earlier, and as much as 15 percent smaller than in the first quarter of 1944, when production was at an all-time high. WFA pork purchases are expected to be large this fall and early winter. With a continuing strong demand for pork and a lower pork output, hog prices may be higher this winter than last.

## FEED

**T**HE prospective 1944-45 supply of the principal feed grains (corn, oats, barley and grain sorghums) as indicated on August 1, is estimated to be about 6 percent smaller than in 1943-44, but slightly larger than the 1938-42 average supply. With a prospective 13 to 15 percent decrease in grain-consuming animals on farms next January 1 from a year earlier, the supply of feed grains per animal unit for the 1944-45 feeding year

would be about 8 to 10 percent larger than in 1943-44, and only about 5 percent smaller than the average for 1938-42, when feed grain reserves were being accumulated.

On the basis of August 1 conditions, locally produced feed grain supplies for 1944-45 in the North Atlantic States will be larger than a year earlier. In the North Central and Southern States locally produced feed grain supplies for 1944-45 probably will be smaller than a year earlier, but in the Western States about the same as a year earlier.

Hay supplies are larger in the Western States this year compared with 1943, but smaller in other regions of the country.

Generally speaking, weather conditions were very favorable in most of the area West of the Mississippi River during the first half of 1944 and feed production in that area has been favorable. East of the Mississippi, however, rather large areas experienced drought or near-drought conditions during much of the growing season.

Prospective 1944-45 supplies of byproduct feeds for livestock are tentatively estimated to be slightly smaller than in 1943-44. Production of oilseed meals may be about 10 percent smaller than the record 1943-44 production. Greater production during 1944-45 than a year earlier is expected in wheat millfeeds, brewers' and distillers' dried grains, and alfalfa meal. Although the total supply of by product feeds may be slightly smaller in volume, it probably will be larger per animal unit on farms next January 1 than a year earlier as a result of the decrease in livestock numbers on farms this year.

## WHEAT

**T**OTAL wheat disappearance in 1944-45 may be about equal to the year's record high crop of 1,132 million bushels. This is less than the

1943-44 disappearance of 1,290 million bushels, but greatly above the 720 million-bushel average in the ten-year period before the war (1932-41). On the basis of present prospects, the distribution may be as follows, in million bushels: food 550, feed 250 (dependent upon the outcome of corn crop), industrial (mostly alcohol) 125, seed 80, and exports (including supplies to liberated areas) 125 (dependent upon progress of the war).

If the size of the disappearance is approximately that of the crop, the carry-over at the end of the year would be about the same as the 315 million bushels at the beginning. The carry-over in 1932-41 averaged 235 million bushels, in 1942 it was 632 million and in 1943, 622 million.

Wheat prices in mid-August were generally at or close to the level at which the Commodity Credit Corporation is purchasing, and about 15 cents under present wheat price ceilings. Ordinarily the seasonal low is reached about this time of the year, and were it not for the Commodity Credit Corporation purchase program, prices would undoubtedly be lower. As it is, prices are at about the purchase program price level in Kansas City, Minneapolis, and Portland. The price of No. 2 Red at St. Louis is slightly above the purchase level.

After the harvest movement is over, the heavy demand for nonfood as well as food uses is expected to be an important price-strengthening factor. Also, large quantities are expected to be held off the market under the loan program.

## VEGETABLES

**A**MPLE supplies of commercial vegetables for the fresh market are in prospect for later summer and early fall, with summer truck crop production indicated to be about one-fifth greater than in 1943 and one-seventh above the 1933-42 average.

Combined production of early fall crops of domestic cabbage, celery and tomatoes and fall carrots was expected to exceed that of 1943 by one-tenth and the average by one-fourth. Continuation of the hot, dry weather prevailing over much of the eastern half of the country will, of course, reduce present prospects.

Particularly heavy supplies of late summer onions which provide storage supplies for winter and early spring consumption are indicated. Acreage this year is the largest of record, with exceptionally good yields in prospect. Substantial increases over last year are expected in the production of summer crops of green peas, lettuce, cucumbers, green peppers and celery, with moderate increases in eggplant, cabbage and cauliflower. Prospective supplies of melons (cantaloups, honeydews and watermelons) are nearly one-third larger than last year, but just slightly above average. Lima beans and spinach prospects are at approximately the 1943 level.

On the other hand, there is likely to be a moderate reduction from last year in summer snap beans, beets, tomatoes and sweet corn and a greater reduction for summer carrots.

Fall crops of cabbage and celery are expected to be larger than last year and also above average. Fall tomatoes and carrots will be in shorter supply this year than last, but should be well above average.

Prospective Irish potato production at 385,295,000 bushels is about one-sixth less than the large 1943 crop but 6 percent above average. The crop in the intermediate States is extremely short because of adverse growing conditions. In the 30 late States, both acreage and yield per acre are below last year but above average. In the early States, harvesting is virtually completed. The indicated sweet potato crop is 65,253,000 bushels—10 percent less than in 1943 and 3 percent below average. Both acreage and indicated per-acre yields are below last year and average.



## FARM LABOR

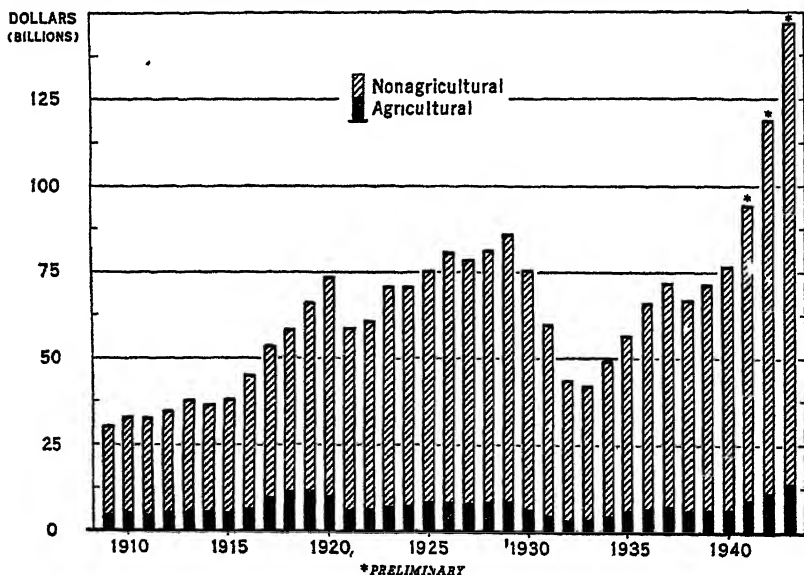
**F**EWER persons were engaged in farm work on August 1 than on that date during any of the past 20 years for which there are estimates. Nevertheless, this year's near-record crops will be harvested without any appreciable loss. Many local areas doubtless will continue to experience difficulty in obtaining an adequate labor supply but for the country as a whole the situation does not appear unfavorable.

Total farm employment in the United States on August 1 was estimated at 10,608,000 persons—4 percent below a year earlier and 6 percent smaller than the 5-year (1935-39) average for that date. Much of the decrease in the total farm employment is the result of a diminishing number of hired workers on farms. The number of hired workers this August was down 268,000 or 9 percent from last August, while family workers dropped only 144,000 or 2 percent.

The customary farm labor supply has been supplemented somewhat during the harvest season with Mexicans, Jamaicans, Bahamians, Newfoundlanders, and Japanese evacuees, also students and city people who in some cases have given up their vacations to help the Nation's farmers.

The usual early August lull in farm activities occurred in areas where the small grains have been harvested. This year, weather conditions in July were generally quite favorable for small grain harvest, haying and late cultivation of row crops, and farmers were taking advantage of it to get caught up in their work. By August 1, the harvest of the second largest winter wheat crop was approaching completion and a good start had been made on the harvesting of spring wheat. Picking of early tree fruits, canberries, and summer vegetables was in full swing in most areas.

**NATIONAL INCOME: AGRICULTURAL AND NONAGRICULTURAL, 1909-43**



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

# Agricultural Prices: A Look Ahead

**A**N analysis of agricultural prices during the transition years following the German collapse is no simple task. There are, as a matter of fact, some differences among observers as to the forces which will operate and even greater differences as to the alternative policies which should be followed.

Some believe that farm prices will continue to be determined in large part by Government action, that the assurances contained in the Act approved October 2, 1942 should take care of farm prices for two years after the end of the war, and that it is very doubtful if such assurances will even then be dropped. Some, however, have small faith in conscious efforts in the field of economic management, while others are worried about the effect of parity standards and control devices on foreign trade as well as on the wise use of resources within the United States itself.

## Price Support Commitments

Farmers have already received assurance of substantial aid in supporting prices under the so-called "Steagall Amendment" and the Agricultural Adjustment Act of 1938, as amended by the Act approved October 2, 1942.

That is, the Congress has directed the Secretary of Agriculture or the War Food Administrator to support prices for the basic agricultural commodities—corn, cotton, wheat, rice, tobacco, and peanuts (for nuts)—and of commodities for which substantial increases in production have been formally requested—soybeans, flaxseed, and peanuts for oil, potatoes and sweet-potatoes (when properly cured), American-Egyptian cotton, hogs, eggs, chickens (excluding chickens weighing less than three pounds and all broilers), turkeys, and milk and butterfat—at not less than 90 percent of parity (or in case of the feed crops, 85 percent, and cotton, 92.5 percent) for two years from the January 1 following the date on which the President or the Congress

shall have proclaimed hostilities to have ended.

This is a far more difficult assignment than anything contemplated in the Agricultural Marketing Act of 1929 or the Agricultural Adjustment Act of 1933. But the commodities covered only account for about 65 percent of the cash farm income because fruits, vegetables, beef cattle and veal calves, sheep and lambs, and wool are not covered. Questions will, of course, be raised relative to these and other commodities, and the Congress has also directed that so far as possible such commodities shall also be supported at a fair parity relationship.

## Price Support Provisos

Can these prices be supported? The answer should, of course, be conditioned: Such prices can be maintained *provided*, adequate funds are at hand, *provided*, means of storing and disposing of substantial quantities of each of the commodities are worked out, and *provided*, production is not forced or maintained too far out of line with the effective demand.

Perhaps the foreign shipment of food to meet relief and reconstruction needs will be sufficient to clear the market during the conversion or transition period. Perhaps not. But means can be found to support prices and to carry stocks of some commodities over a considerable period, and the actual existence of excess or surplus commodities also forces a continuing search for new or more acceptable means of disposal.

There is, of course, the question of funds: it will be necessary for Congress to provide adequate funds to make the price-support program effective, but on two recent occasions Congress has, in fact, specifically instructed the Secretary of Agriculture or the War Food Administrator to support prices at announced levels.

Annual appropriations equal to 30 percent of the tariff revenues are available for surplus disposal and

similar uses, and agriculture also has some claim on the lend-lease appropriation in case a disaster or insurance fund is needed. However, the use or continuance of these funds will, of course, depend upon the future action of Congress as will the life and financial resources of the chief support agency, the Commodity Credit Corporation.

#### **Four Methods Now Used**

Support activities should be designed to fit the commodity concerned, and four different methods are currently being used.

*First*, there are the non-recourse loans which apply to basic crops and other commodities which are easily stored and marketable in the condition in which they leave the farm. *Second*, there is the direct purchase of commodities from the farmers. Such commodities must be easily stored and this method is now being used for peanuts, soybeans, flaxseed, and wool. *Third*, there is the purchase of graded or processed commodities from dealers or processors provided specified minimum prices are paid to the producers of the raw material. Perishable commodities can be handled by this method which is now being used to support prices for eggs, for hogs, and for vegetables for canning. *Fourth*, supplemental payments to producers are also used as a means of price support. Such payments are now being used to assure returns for milk and butterfat.

All of these except the last are only immediate devices for holding prices to a given level. They do not dispose of the product. Supplemental payments allow the commodity to move forward without delay to consumers at a lower cost than were prices maintained at the support level. There are cases, however, where even this would not assure that the excess supplies will be satisfactorily disposed of.

Agricultural production was over one-fourth and food production almost one-third greater in 1943 than the average for 1935-39. Farmers have

established a new record each year since 1939, and this gain in production can easily be maintained or further increased in the years immediately following the slowing down of the all-out war effort. Yields are increasing as a result of several factors, including conservation activities, the increasing use of fertilizer, and in the case of corn, the use of hybrid seed. Small farms can now be mechanized and a substantial number of horses and mules are still being displaced. A considerable area of new land is still to be brought under cultivation, and given good prices, it would be difficult to estimate the areas now in use which might be more intensively farmed.

The effects of the efforts to control acreage and production under the Agricultural Adjustment Administration have already been argued at length. Control can be obtained in cases where the specific commodity situation becomes sufficiently bad. But the extent to which over-all production can be restricted is doubtful and it seems reasonable to conclude that acreage and similar controls are devices which should only be used as a last resort.

#### **Domestic Market Takes Most**

The greatest consumer of our agricultural commodities is our own domestic market. Civilian consumption currently accounts for about 75 percent of all agricultural commodities used for food and if normal allowances were made for men in the armed forces this would be increased to about 85 percent. Thus, as the armed forces are demobilized, there will be about 15 percent of all our food and substantial quantities of cotton and tobacco for which additional markets must be found.

The first outlet for these additional quantities of food is foreign relief. Food and clothing must be available for relief once France and the rest of Continental Europe have been liberated. Shipping space should be available and there is no doubt but what

substantial quantities of food and other agricultural commodities will be used for foreign relief until the reconstruction task is well started.

Sooner or later, however, this relief demand will be met and farmers may find themselves with greater supplies of some commodities than can be easily sold. Such supplies have already developed in the case of eggs, hogs and some other commodities during 1943-44. If farm prices are to be maintained at what farmers consider a fair level along with full agricultural production, additional markets or socially acceptable means of disposal must be found.

### Many Still Underfed

We were continuously faced with this same problem during the decade from 1930 to 1940, and we are all familiar with some of the devices which were developed. A widespread search for new industrial uses was instituted. The school lunch program was started and the food stamp and other surplus disposal devices were originated. Still other efforts were made to increase the amounts of the surplus commodities going into the foreign market.

A great deal was learned and we started into this decade convinced that a substantial number of consumers were not well fed, nor for that matter well clothed or well housed. Substantial amounts of additional food are needed to raise sub-standard diets to an adequate level and the actual results of full employment indicate that the average consumer is willing to use about 15 percent more food than was used during the several years ending in 1929, or the average for 1935-39.

Satisfactory prices for agricultural commodities can best be assured by full employment. At least this is true for almost all of the food commodities although it is evident that satisfactory prices for cotton and some other commodities, perhaps wheat and lard, will also depend to a considerable extent upon the foreign market.

So far as fair prices are concerned, the discussion centers around the parity standard. Farmers have wanted parity or something like it and, certain critical comment notwithstanding, it seems reasonable to assume that they will continue to demand parity or its equivalent in the years ahead.

A common criticism runs to the effect that there is nothing sacred about the relative level of farm and nonfarm prices during 1909-14. Some would like to maintain the current base as a measure of the general level, while reworking prices for individual commodities on the basis of some recent relationship, and others would like to simply shift the base period forward to 1925-29 or 1935-39. Again, there are others who seem to feel that parity as such should be disregarded and some entirely different approach used.

### Parity Concept a Reasonable Goal

*As an average*, parity prices appear to be a reasonable goal given full employment and consumer incomes at least approaching those which have prevailed since 1942. Some revisions are certainly needed, but the current standard is well established and the best forecast seems to be that parity will be continued into the transition years in about the same form as we now know it.

Some are worried about using such a standard while at the same time endeavoring to move American commodities into the foreign market. A discussion of the need for encouraging foreign trade cannot be entered into here, but this dilemma is as familiar as are the two solutions most commonly advanced. The first is the use of some form of a two-price system while the second involves the use of supplemental payments to assure returns to producers, while at the same time allowing the commodity to move forward at a relatively low cost.

Some of our difficulties could best be solved by full employment. And after

all there will be difficulties enough with almost ten million soldiers and sailors and over ten million war workers who must shift to new fields of employment as the war effort comes to an end. At the same time, farmers feel that their prices should be maintained and likewise workers are not going to be too well satisfied with declining wages after seeing average weekly

earnings almost double between 1935-39 and early 1944. All of these are forces driving toward a common effort to maintain full employment. Agriculture's goal should be "full production and full employment"—full production and fair prices for farmers and full employment and fair wages on the non-farm front.

O. V. WELLS  
Bureau of Agricultural Economics

## New Food Consumption Index

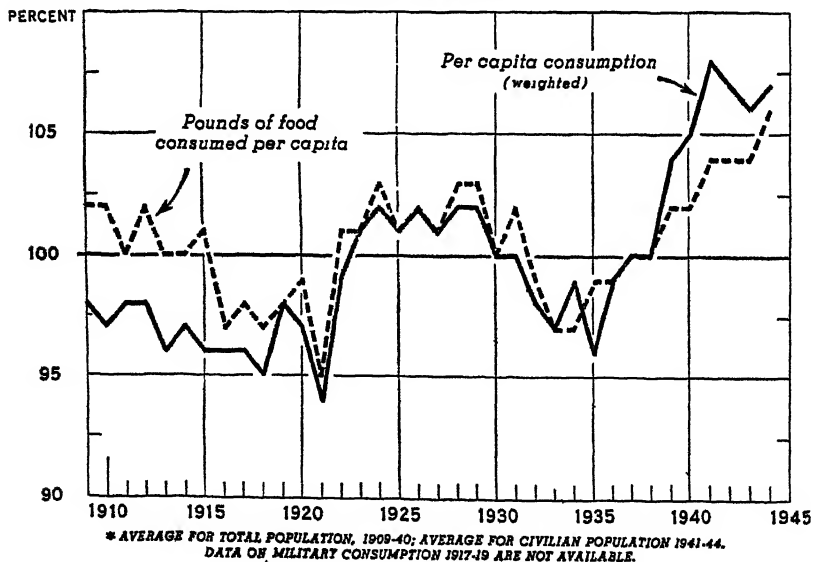
**C**IVILIAN food consumption per capita in 1944 will be 7 percent above the average for the 5 pre-war years, 1935-39, according to preliminary estimates of the Bureau of Agricultural Economics. This estimate makes no allowance for food production in city gardens, which if equal to that estimated for 1943, will bring consumption this year to 8 percent above the pre-war average or the same as the record level established in 1941.

These comparisons are based on the new index of per capita consumption recently released by the Bureau. The new index indicates that there has been a slight upward trend in food consumption since 1909, along with some shift from the cheaper foods to the more expensive varieties, although low points are recorded for 1921 and for the depression years of the early 1930's. See chart below.

The new index is constructed from estimates of the per capita consump-

### PER CAPITA CONSUMPTION OF FOODS\*, 1909-44

INDEX NUMBERS (1935-39=100)



tion of foods in terms of retail weight, which is the same data currently used by the Bureau of Human Nutrition and Home Economics in analyzing the nutritional value of the average national diet. Quantities of foods consumed per capita each year are weighted by the average retail prices for the base period, 1935-39. Because the same price weights are used for every year, the changes in the index result from changes in the quantities of the several foods consumed.

Although the total number of pounds of food consumed per capita

does not vary greatly from year to year, there have been significant changes in the composition of the diet since 1909. The consumption of fruits, vegetables, and dairy products has increased, while the consumption of grain products and potatoes has declined. These shifts are accompanied by general improvement in the nutritive content of the diet.

The index represents per capita consumption of food for the total population from 1909 through 1940, and for the civilian population since 1941. No adjustment has been made

### Per Capita Food Consumption, by Major Food Groups, 1909-43<sup>1</sup>

[Index numbers 1935-39=100]

Year	Total	Dairy products	Meats, poultry, fish	Eggs	Potatoes, sweet-potatoes	Beans, peas, nuts	Fats and oils	Flour, grain products	Sugar, syrups	Fruits	Vegetables	Coffee, tea, cocoa, spices
1909.....	98	79	119	98	141	64	101	140	81	71	76	73
1910.....	97	80	115	103	145	61	100	141	84	71	72	69
1911.....	98	80	118	110	130	60	103	137	86	79	70	67
1912.....	98	80	113	104	133	60	98	139	83	81	77	79
1913.....	96	82	110	102	135	63	99	136	88	70	74	68
1914.....	97	83	109	99	120	61	101	136	86	85	75	71
1915.....	96	83	104	105	134	63	102	132	84	83	75	79
1916.....	96	84	107	100	111	71	103	135	86	75	72	85
1917.....	96	85	104	94	118	105	96	136	88	75	73	94
1918.....	95	86	109	95	131	97	94	119	87	68	77	86
1919.....	98	86	107	102	120	92	100	128	100	76	77	84
1920.....	97	89	105	100	119	74	93	121	97	84	82	84
1921.....	94	89	103	100	120	74	94	116	94	72	73	84
1922.....	99	92	106	106	121	70	98	119	110	86	77	83
1923.....	101	94	111	110	128	80	106	116	98	84	78	94
1924.....	102	98	111	109	113	93	107	115	108	87	83	89
1925.....	101	100	109	107	109	89	105	114	110	83	82	82
1926.....	102	100	107	114	98	89	104	116	112	97	82	91
1927.....	101	100	105	115	109	99	106	115	111	82	86	88
1928.....	102	100	101	114	115	97	107	117	113	92	84	85
1929.....	102	102	101	112	115	88	107	114	106	89	91	89
1930.....	100	100	100	110	109	84	104	112	115	84	90	87
1931.....	100	97	99	111	104	99	106	110	107	96	90	91
1932.....	98	95	100	104	110	87	106	105	101	80	90	90
1933.....	97	94	104	99	108	79	105	100	102	80	86	92
1934.....	99	93	112	96	108	87	106	100	101	84	88	87
1935.....	96	95	94	93	112	98	95	98	100	95	96	97
1936.....	99	99	102	96	100	98	100	102	102	93	95	100
1937.....	100	101	100	103	96	99	99	100	99	104	101	95
1938.....	100	101	99	103	100	98	100	100	98	96	105	102
1939.....	104	104	104	104	92	107	106	101	91	112	104	106
1940.....	105	105	108	106	96	106	109	100	97	108	103	108
1941.....	108	109	110	104	94	109	106	101	107	110	109	112
1942.....	107	117	109	104	95	121	100	104	100	93	115	91
1943.....	* 106	115	111	115	100	123	100	108	89	86	108	87
1944 *.....	* 107	116	111	115	99	120	102	107	91	95	108	108

<sup>1</sup> Foods grouped according to nutritional categories, with butter excluded from dairy products and included in the fats and oils group.

\* Production in city victory gardens not included. Including such garden output increases the index to 107 for 1943 and 108 for 1944.

\* Preliminary.

for military consumption during the period of the first World War, since adequate data on military purchases are not available. However, since military personnel constituted only a small part of the population, adjustments for military consumption would be negligible, and the index should give an accurate measure of per capita changes in civilian consumption between World War I and II.

If it is desired to compare the per capita consumption of food during the present war for the total population, including men and women in the armed forces, with the estimates for the period of the first World War, certain assumptions must be made.

According to the War Department, the average daily consumption of food by military personnel is about 5½ pounds per capita, compared to about 4 pounds for civilians. But because the foods used by the military are more highly concentrated than those consumed by civilians, these figures tend to underestimate the comparison. Assuming that members of the armed forces consume about one and one-half times as much as the average civilian, the index of per capita consumption for the total population would be 111 as compared with the index for the civilian population of 107 now estimated for 1944.

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## Wartime Farming in Britain

BRITAIN'S wartime farm production deserves study, both because of its amazing record and because of its post-war implications. The record is dramatic for three reasons, and can perhaps best be indicated by a comparison with our own great wartime food production achievement here in the United States.

First, Britain's farm output per man, or per acre, was already higher than ours before the war. Second, while we have increased our production enormously during the war, with a total food output last year 32 percent above the 5-year pre-war average, Britain's wartime increase was 70 percent. Third, while British farmers had equal or greater problems of limited labor, machinery, equipment, and transportation, they also had strictly rationed feed for livestock and more rigid controls over every phase of their farming operations, in addition to the bombings, the four years of blackout farming, and the other difficulties of farming under fire.

In terms of people engaged and the value of output, Britain's pre-war agriculture in some years was greater than in any of its Dominions, including Canada. Iowa and Indiana are slightly

larger than Britain, but the value of the production of the 400,000 farms of even these two great farm States was slightly less than that of Britain's 400,000 farms.

British farmers produced more beef than those two States combined—60 percent as much meat, even including pork. British farmers milked more cows, produced more eggs, more sheep and wool, twice as much hay, more wheat, and much more fruit and vegetables.

Pre-war Britain had more cattle than Texas, a cattle country three times its size, and more sheep than Texas and Wyoming combined, producing half as much wool as the whole United States. Britain produced more milk than Wisconsin, our No. 1 dairy State; more vegetables than California, our first vegetable State; more sugar beets than either California or Colorado, our two leading sugar beet States; and twice as many potatoes as Maine and Idaho combined. Then last year she nearly doubled even that potato production, to equal the normal potato output of the whole United States.

Greater yields per acre are a part of the answer. In 1942 the U. S. average wheat yield was near our all-

time peak of about 20 bushels per acre. Our best-yielding wheat State was Washington with an average of 30 bushels per acre. Britain's was 37

### **50 Percent More Tilled Land**

Starting from that pre-war high level of food production and farming efficiency, Britain has increased its plowed acreage by 50 percent since the war began and its total food production by 70 percent.

The increased plowed acreage and the increased total food output have resulted largely from rigid and comprehensive Government controls. Early in the war, a Government survey covered every field on 300,000 farms and recorded in detail the condition of each farm, its equipment, its crops, its livestock, its possibilities. From that study a farm plan was made for each farmer. Usually the farmer followed instructions. If he refused, the county committee had the authority to operate the land or turn it over to a tenant who would conform.

### **Local Committees Direct Output**

The county committees are appointed by the Minister of Agriculture. They are farmers of the neighborhood and they serve without pay. The income tax rates are so high that a farmer successful enough to qualify as a committeeman is probably already in the excess profit tax bracket, paying 100 percent of his income above a certain level, so that any pay would all be taxed back anyway.

The committeemen direct their neighbors to step up production of certain crops and cut down on others, to apply the proper amounts of fertilizers, to reduce the numbers of beef cattle, hogs, sheep, and poultry, and to increase the number of dairy cattle, all to get the maximum food value from their limited feed supply.

Hog numbers have been reduced by 59 percent of the pre-war numbers, to save feed for more efficient direct human consumption. The hog farmer is required to raise feed according to the number of hogs he keeps. He

must sell a certain percentage of the feed he raises, and he is issued coupons by the county committee for feed supplements and may buy only within his strict ration. He may butcher for his own use only according to the regulations. When his hogs are ready for market he notifies the county committee and sells on the date specified at a specified market at a fixed price.

The dairyman is issued feed coupons and may buy feed for his cows only within the limits of his ration. Before the war British dairymen depended on imported feed from the Continent for much of their total supply. When this was shut off, their adjustments were severe, particularly in view of the increased number of cows. They had to produce more feed and use it more efficiently.

### **Farm Labor Difficulties Severe**

For farm labor the British farmer has relied on women, old men and children, war prisoners, and long hours for himself and family. On many large dairy farms all the work is done by the Women's Land Army, which is recruited entirely from cities and towns.

Machinery is rationed and, for maximum efficiency, many county committees own and operate tractors on a custom basis. The Northumberland county committee owns and operates more than 500 tractors.

But the blackout is perhaps the greatest single handicap British farmers have. Most of Britain is farther north than Maine, and the winter nights are long. Every barn and shed is completely blacked out and a farmer may not even carry a lantern while doing chores in the darkness of his long working day.

### **Large Post-War Production**

What about after the war? Will this increased production be maintained?

The Minister of Agriculture said this summer: "The Government has decided to guarantee to producers of milk, fat cattle, calves, sheep and lambs an assured market for their



whole output of milk and meat during the four years up to the summer of 1948 at price levels not less than those at present prevailing. It is designed to encourage farmers to produce the increased quantity of milk that is likely to be required in the next four years. \* \* \*

The Minister of Food recently said: "We must produce at home as much of these products as we can. I want to see the milk-in-schools scheme continued, and I want to be able to discontinue milk rationing as soon as possible after the war. I want also to get rid of meat rationing as soon as possible after the war. To do that, we must increase our meat herds and our sheep flocks here. \* \* \* We shall still want large cereal crops; we shall still want large potato crops and we shall still want large crops of sugar beets. \* \* \* But, as far as supplies from overseas are concerned, the Committee would like to know that I have started

negotiations for the conclusion of long-term contracts for some of the principal imported foodstuffs. This will enable overseas farmers to plan their production for a period ahead, and will ensure supplies to this country during a difficult period."

A statement of British post-war agriculture was recently adopted by representatives of most of the important farm groups of the country. This statement calls for encouraging mixed farming, for the regulation of production and marketing as proposed in the report of the Hot Springs Conference, and states that in return for a guaranteed price level, all farmers must accept an obligation to maintain a reasonable standard of good husbandry and submit to a necessary measure of direction and guidance.

In brief, British post-war agriculture appears likely to continue on an expanded production basis.

FRANCIS FLOOD, *Office of Foreign Agricultural Relations*

## Post-War Outlook for Oilseeds

**D**URING the past ten years there have been marked changes in the production, processing, and uses of oilseeds and fats and oils. Outstanding has been the growth of the soybean industry. Flaxseed acreage and production recovered from the low level of the drought years to a record high in 1943, then fell back almost half way in 1944. Peanut acreage nearly doubled under the stimulus of wartime demand. Lard output grew from the lowest in 46 years in 1935, when farmers reduced hog production because the drought had burned out feed crops, to the largest on record in the 1943-44 hog marketing season.

### Shifts in Foreign Trade

Our foreign trade in fats and oils has undergone violent fluctuations in the 10-year period. Imports were unusually large in the drought years and were large again in 1941, when

demand in the United States for fats and oils was exceptionally strong. Then in 1942, with the Japanese taking over the Philippines and other great surplus tropical oil-producing areas of the Southwest Pacific, our imports were cut in half. At the same time we undertook to supply the United Kingdom and Russia with large quantities of lard, margarine, shortening, and vegetable oils because they too had been partly deprived of their usual sources of supply by Axis aggression. In 1943 and 1944, the United States has been a net exporter of fats and oils, in contrast to our pre-war position as a net importer of about 1½ billion pounds annually.

In response to the urgent need for fats and oils to fill the gap between requirements and supplies resulting from reduced imports and increased exports, as well as a high level of domestic demand for both food and

industrial uses, farmers expanded acreage of soybeans, flaxseed, and peanuts. They also raised an unprecedented number of hogs, needed for lard as well as pork.

Production of oilseeds in 1943 compared with the 1937-41 average was as follows: Soybeans, 196 million bushels, up 157 percent; flaxseed, 52 million bushels, up 166 percent; peanuts, 2,200 million pounds, up 58 percent. Lard output in the hog marketing year beginning October 1943 is estimated at 3,550 million pounds, 81 percent more than the 1937-41 average. Total output of fats and oils from domestic materials in 1943-44 was about 11.3 billion pounds, 38 percent more than the average for 1937-41.

### Post-War Demand Less

The strong wartime demand for fats and oils produced in the United States will not continue indefinitely after the war. On the other hand, our farmers could not continue to produce fats and oils at the level of the past year or two, at least without major readjustments in price relationships between oilcrops on the one hand and wheat, corn, oats, and cotton on the other; or without major readjustments in crop rotations and farming practices. Some decline in output of fats and oils is already certain to occur in 1944-45, as a result of a reduced 1944 pig crop and planted-acreage reductions in soybeans, flaxseed, and peanuts.

Most fats and oils produced in the United States are by-products. This is true of lard, tallow and greases, cottonseed oil, corn oil, and peanut oil, which together accounted for 62 percent of the total output of fats and oils from domestic materials in 1943-44. Butter also is partly a by-product, for in many areas it is produced mainly in the flush season when milk supplies exceed consumption in the main uses. The only major farm products produced primarily for oil are soybeans and flaxseed. Post-war changes in de-

mand and supply for fats and oils will be reflected most directly in output of these two crops. Production of other fats and oils will be determined largely by supply and demand factors for pork, beef, cotton, and various milk products.

Consumption of fats and oils in the United States probably will continue the pre-war upward trend. Annual U. S. consumption in the late 1940's may average 1 to 1.5 billion pounds more than the average of 9.7 billion pounds consumed annually in 1937-41. This additional consumption probably will be supplied through a corresponding increase in domestic output of fats and oils, as net imports of fats and oils are not likely to be any greater for several years following the close of the war than they were in the years immediately before the war. Time will be required to restore livestock production in Europe to the pre-war level, and to bring coconut and palm groves of the Southwest Pacific back to pre-war productivity. Also, the pre-war upward trend in fats and oils consumption in foreign countries may be resumed after the war.

### Large Soybean Acreage

Although the acreage of soybeans probably will be considerably larger after the war than before, some decline from the wartime level of 11 million acres harvested for beans seems likely. Many farmers reported that in 1943 they planted a larger acreage of soybeans for harvest as beans than could be continued under good farming practice. On most farms where soybeans are grown, a balance must be struck between soybeans on the one hand and corn and other feed crops and pasture on the other.

A domestic market for an additional 1 to 1.5 billion pounds of oil would be equivalent to an outlet for the oil produced from an additional 6 to 9 million acres of soybeans. From the standpoint of demand for oil, 10 million acres harvested for soybeans in the late 1940's, compared with an average of 4 million acres in 1937-41,

would not appear to be excessive. Competition of corn, oats, wheat, hay crops and pasture for the available land, however, may restrict soybeans to 8 or 9 million acres.

Higher soybean oil and meal prices than before the war are likely to result from the trend toward increased use of solvent-extraction method of processing soybeans. This method obtains a higher yield of oil than the screw-press or "expeller" method, which is at present more widely used. With oil normally priced several times higher per pound than meal, the value of the products obtained per bushel of beans crushed is 7 to 10 percent higher when solvent extraction is used. This means that plants with solvent methods can operate on lower processing margins, and their competition with plants will tend to lower the margins of all processors. There will be surplus soybean-processing capacity after the war and this will tend to enforce competition among mills for soybeans to crush and hence to keep prices for soybeans high in relation to prices of oil and meal.

Recent research has shown that an increase in the percentage of protein in livestock rations increases production and lowers feeding costs. Widespread adoption of recommendations based on these findings would greatly increase the demand for oilseed meal and would tend to increase demand for soybean meal in relation to that for corn.

### **New Uses Developed**

During the war manufacture of soybean flour has been increased several fold. However, the estimated quantity of soybeans used in 1943 to manufacture soybean flour was only 7 million bushels compared with a total crop of 196 million bushels. The Northern Regional Laboratory in Peoria, Illinois, has recently developed two outstanding new industrial substances from soybean oil: Norepol, a type of synthetic rubber, and Norelac, a kind of plastic. There has been no

opportunity to explore the full market potentialities of these products because of the wartime need for soybean oil for edible uses.

Another recent development, retarded by wartime conditions, is a process for dividing soybean oil into a quick-drying fraction, with properties somewhat similar to those of tung oil, and a fraction that is superior for food uses than the original oil. Some experimental work has been done in developing a synthetic fiber from soybean protein, but this has not yet entered the stage of commercial production. A minor outlet for soybean protein, derived from soybean meal, has been afforded for a good many years by use as a glue and as a sizing for paper. To sum up, new uses of soybeans are being investigated and tried out, and some minor industrial uses have become firmly established, but there is no definite promise that uses other than oil, and meal for feed, will develop in the next few years into major markets for soybeans.

### **Increased Flaxseed Output**

Flaxseed acreage and production in the United States after the war probably will return to pre-war levels. With the return of ample ocean transportation, Argentine flaxseed will again be available in large quantities. Demand for linseed and other drying oils may be stronger than before the war. Building activity is expected to rise materially, and general industrial activity also may be at a high level. However, no substantial change in the pre-war price structure for flaxseed seems likely, under which Argentine flaxseed was imported for crushing by Atlantic Coast mills and domestic flaxseed was crushed in mid-West and Pacific Coast mills, with mills at Buffalo crushing sometimes imported and sometimes domestic flaxseed, depending on the current price relationship between the two kinds.

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# The Cotton Situation

**F**ARMERS of the United States are now in the midst of harvesting and marketing their 1944 cotton crop while State and local agricultural groups and workers in the Department of Agriculture are in the midst of determining what production to recommend these farmers to plan for in 1945. If cotton farmers react as in past years, most of them will to a considerable extent base their plans for the new crop upon their experiences with the crops they are now marketing, modified to some extent by changes prior to planting time next spring. Such factors as the existing supplies of cotton, probable consumption and exports during this and the 1945-46 season, as well as prospective farm labor supplies in the Cotton Belt and probable prices of cotton and alternative agricultural products, should all be taken into account in determining next year's acreage.

## Largest Gross Return

Raw cotton prices have been relatively stable in recent weeks at levels a little above the high 1943 prices, and domestic producers are receiving one of the largest gross returns from cotton since 1929. With the smallest acreage since 1895 and a crop estimated in August at nearly 1½ million bales less than the 10-year (1933-42) average, the gross returns per harvested acre this year may exceed the two previous crops' high returns and be second only to the record per-acre returns of 1919.

In view of increased production costs, the 1944 cotton crop probably will not prove as profitable as that of the two preceding years, but the effect of this on 1945 acreage may be overshadowed by other factors. The 7 percent reduction in the 1944 cotton acreage was probably due in part to a somewhat less profitable crop in 1943 than in 1942, although more influential factors include inadequate supplies of farm labor, unfavorable weather conditions at seeding time, and favorable alternatives requiring less labor.

With a 10¼ million running bale crop (11 million 500-pound bales) now in prospect, the indicated 1944-45 world supply of American cotton of just under 22 million running bales is about ¾ million bales less than the total supply for last season, which itself was the smallest since 1936-37. Out of the total carry-over of American cotton of a little over 11 million bales on August 1 this year, all but about ½ million bales were in stock in the United States, something over 6 million bales of which were Government financed stocks. This made the third consecutive year in which total stocks of American cotton in the United States amounted to approximately 10½ million bales with Government financed stocks representing about 4½ to 6 million bales.

For the year ended July 31, 1944, the world consumption of American cotton totaled less than 11¼ million bales, approximately 9.8 million bales of which was consumed in the United States. This is about ¼ million bales smaller than world consumption in each of the two preceding seasons due to a decline in the United States which more than offset a small quantitative, but considerable percentage, increase in foreign countries. Despite very strong civilian and military demands for cotton goods, domestic mill consumption was less than in each of the two preceding seasons, by a little over 1 million bales. It is highly significant, however, that domestic mills still consumed more than half again as much cotton as on the average from 1930 to 1939. The decline in 1943-44, compared with the peak war years, is largely attributable to difficulties in maintaining efficient workers and to declining margins.

## U. S. Exports Now Slight

Cotton export statistics for the war period are confidential, but it is well known that because most of the cotton importing countries are under Axis control, foreign shipments of American

cotton have been extremely small during the last 4 years. During the season just past, it is estimated that the total consumption of American cotton outside the United States amounted to only a little over 1½ million bales. While this is between ¼ and ½ million bales larger than the two preceding years, it is nearly 75 percent less than the 1930-39 average. Except for the shortage of ocean shipping facilities and with the existing United States loan policy, exports and foreign consumption of American cotton might have completely vanished. The reasons for this are obviously of great significance, for it may not be many more months until there will be an adequate supply of ocean shipping and, according to existing legislation, Government loans of 92½ percent of parity are mandatory for at least 2 full years after the war.

Before the mills in the Axis controlled areas were isolated from the important cotton exporting countries, annual average (1934-38) commercial production of foreign cotton was only about 5¼ million bales less than total annual foreign mill consumption. Since the areas which have been under Axis control were on the average consuming about 10½ million bales per year, the isolation of these markets has resulted in a large accumulation of supplies of foreign cotton despite some reduction in foreign production and increased consumption elsewhere. In view of the greatly restricted export outlets, foreign exporting countries, such as Brazil, India, Egypt, Argentina, and Peru, could have supplied all accessible markets and still would have accumulated large stocks of raw cotton even if no American cotton had been exported.

### **World Carry-Over Large**

As of August 1, 1944, the world carry-over of foreign grown cotton was estimated in excess of 14½ million bales which is almost twice as large as for August 1, 1939. Furthermore, even if the production of foreign

cotton for the current season is no larger than in 1942, the smallest crop since 1934, production probably will again exceed consumption of this cotton and may increase the carry-over by another million bales or more. In view of the large excess supply of foreign cotton together with the scarcity both of import markets and shipping space, cotton prices in Sao Paulo, Brazil, have been 6½ to 11½ cents per pound lower than prices of approximately similar cotton in New Orleans, which have been supported by Government loans and by limited imports into the United States (as a result of import quotas and lack of shipping facilities). For sometime prior to the war the price at Sao Paulo averaged slightly higher than the price at New Orleans. With adequate shipping facilities, foreign manufacturers obviously would have used the cheaper foreign growths instead of American. This would have reduced the disparity between domestic and foreign cotton, but only to a limited extent in view of the excess supplies of foreign cotton and assuming no change in the domestic loan rates.

### **Exports and Subsidies**

Until shipping facilities become much more plentiful, American cotton can and will be exported, in at least small quantities, without being subsidized. From a longer time standpoint one of the most important questions is the extent to which American cotton can be exported (without subsidies) after adequate ocean shipping becomes available. This will depend (assuming continuation of high Government loan rates in the United States) upon whether or not cotton prices in foreign countries advance sufficiently to eliminate the disparity between prices in those countries and in the United States. This, in turn, would largely depend upon the world consumption of cotton in relation to world supplies.

Even after all the mills of Europe

and the Orient are accessible, it is by no means certain that the total world consumption of cotton will average as high as immediately before the war. There is still more uncertainty as to whether consumption will average as high in relation to world supply as from 1934-38, for since that time the world supplies of cotton have increased and the world production of rayon probably has already increased by the equivalent of at least 5 million bales of cotton (assuming 425 pounds of rayon equivalent to 1 bale of cotton) and further increases are likely. In 1944-45 world supplies of all cotton now seem likely to exceed the 1934-38 average by 2 or 3 million bales despite a reduced American cotton supply.

With the world divided into a number of separate markets, it is impossible to determine what the present prices now existing in a given locality would be equivalent to in a market as

nearly on a "world basis" as that existing from 1934-38. It is highly significant, however, that in those pre-war years—when annual world supplies of cotton were smaller than at present and consumption some 3 or 4 million bales larger—the basic quality of American and Brazilian cotton on a "world basis" averaged between 11 and 12 cents per pound. These prices compare with a domestic price for American cotton in August this year of about 21 cents and a price at Sao Paulo, Brazil, of a little over 13 cents. Assuming the world demand does not prove adequate to eliminate the price disparities, some means must be found for making the export price of American cotton competitive with foreign growths, otherwise, the foreign market for U. S. cotton—which from 1934-38 averaged 5 million bales per year—would be lost.

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## Farmers and the New Income Tax Law

**J**UST how will farmers be affected by the Individual Income Tax Act of 1944? This new law, passed in response to great clamor for income tax simplification, gives particular attention to the computation of tax liability and to the nature and timing of reports.

The first step for the farmer still is to determine the amount of income he as an individual has received during the year, a problem not affected in any material way by the new law. Regardless of the forms and the regulations of the Bureau of Internal Revenue, the farmer himself must assemble the basic financial information about his business and establish the amount of the net profit.

The new law may increase the number of farmers who must report their incomes as every individual who has a gross income of \$500 or more must now file a return. No distinction is made because of marital status, as has been

done in the past. Also under the new law the earnings of minor children are considered part of the gross income of the child even though the wages are actually received by the parent. And a child with more than \$500 gross income must file a return or have one filed on his behalf.

Two kinds of reports—declarations of estimated tax and tax returns—are still required but the rules regarding them have been changed. A declaration of estimated tax is required of a farmer whose gross income is \$500 or more. The general rule is that a declaration is required in cases where it is reasonable to expect (1) an income in excess of \$100 from sources not subject to withholdings and a gross income of \$500 or more, or (2) an income subject to withholdings in excess of the sum of \$5,000 plus \$500 for the spouse and \$500 for each dependent.

For taxpayers generally, declarations must be filed on or before March 15 of the current year, and payment may be made in four installments which are due March 15, June 15, and September 15 of the current year, and January 15 of the following year. Special provision is made for those who get at least two-thirds of their gross income from farming. Farmers who are in this class may wait until January 15 of the following year to file a declaration. In this case the full amount of the estimated tax must be paid at that time.

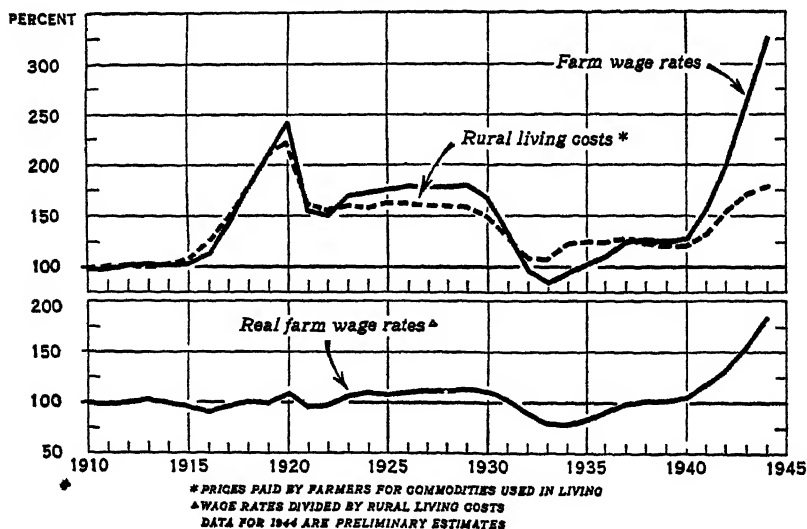
Final returns and final payments for a given taxable year are still due on or before March 15 of the following year. Farmers who are in a position to do so, however, may file final returns by January 15 and thereby avoid the need for filing a declaration of estimated tax. Taxpayers whose "adjusted gross income" is less than \$5,000 will have a new "short form" on which they can determine their tax by reference to a tax table. Tax-

payers who are not eligible to use the tax table or for whom the short form is disadvantageous will have to compute the tax amount, but they will probably use a much simpler form than in the past.

"Adjusted gross income" is a new concept. It is, in effect, an individual's personal gross income after deducting all business expenses. For a typical farmer it would consist of the net profit from his farm business, plus the net profit from other business activity, plus any other personal income. As only business deductions are permitted in determining adjusted gross income, farmers need to separate items clearly which may be partly business and partly personal. Taxes and interest, for example, can be deducted, when computing adjusted gross income, only to the extent that they are directly related to the farm business. Individual taxpayers may choose either to list actual amounts of personal deductions or to take an optional standard deduction.

## FARM WAGE RATES, RURAL LIVING COSTS, AND REAL FARM WAGE RATES, UNITED STATES, 1910-44

INDEX NUMBERS (1910-14=100)



The new tax table for the "short form" is set up to permit its use by any taxpayer whose adjusted gross income is less than \$5,000. The amount of tax reflects a standard deduction of 10 percent of adjusted gross income, which is in lieu of any other nonbusiness deductions or credits.<sup>1</sup> Taxpayers who cannot use the tax table, because their adjusted gross income is \$5,000 or more, may take a standard deduction of \$500 in lieu of listing the actual amounts. Of course, any taxpayer who chooses to compute his own tax may itemize his various nonbusiness deductions and credits, much as at present. This would be advantageous only for those whose deductions are in excess of 10 percent of their adjusted gross income.

### Exemption Scheme Changed

The scheme of personal exemptions has been changed to provide for a straight per capita basis. For surtax purposes a taxpayer is allowed an exemption of \$500 for himself, \$500 for his wife, and \$500 for each dependent. For normal tax purposes each taxpayer gets an exemption of \$500, regardless of marital status or number of dependents. On a joint return the normal tax exemption is limited much as was the specific exemption under the victory tax. That is, the amount which may be claimed is \$1,000, unless the adjusted gross income of one spouse is less than \$500, in which case the exemption is limited to \$500 plus the adjusted gross income of the spouse with the smaller income.

The definition of dependency has been rewritten to eliminate the tests of age and capacity for self-support and to provide instead that dependency can be claimed for any person of certain specified close relationship who receives more than half his support from the taxpayer. Further pro-

vision is made that a dependency exemption cannot be claimed for any individual who has a gross income of \$500 or more, because such an individual must file a return of his own.

Those who compute their tax without reference to the simplified tax table will find the victory tax has been eliminated but the normal tax has been changed to make it very similar to the old victory tax. A new schedule of surtax rates has been provided which, in most brackets, merely combines the old normal and surtax rates.

It is obvious that many of the complexities which bothered taxpayers in the past will be eliminated from income tax reporting. But it is also obvious that there are certain things which cannot be simplified by law or by regulation. When there is a tax which is based on income, it is necessary for the taxpayer, especially if self-employed, to provide a demonstration of some sort as to the amount of that income. A wage or salary earner can depend upon his employer to furnish him with a statement of earnings. But a self-employed taxpayer, such as a farmer, must take the responsibility himself for having available for income tax reporting the basic financial information about his business operations.

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*Current Developments in the Farm Real Estate Market.* Processed. 6 pp. Bureau of Agricultural Economics. Washington. July 1944.

Upward movement in farm real estate values continues. Volume of sales highest of record. Basic forces stimulating advance are favorable farm commodity price and income levels and growing accumulations of funds available for land purchase.

*Farm Real Estate Taxes in 1943.* Processed. 3 pp. Bureau of Agricultural Economics. Washington. July 1944.

Little change in farm real estate taxes in 1943 as against 1942. Future trends to be determined in part by relative importance of property taxes in State and local tax systems; in part by extent and cost of services provided by these governments.

<sup>1</sup> The Revenue Act of 1943 (enacted in early 1944) does not provide for the deduction of Federal excise taxes except when paid as a business expense. The same law also eliminated the earned-income credit.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100)	Income of in- dustrial workers (1935-39 =100) <sup>1</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Whole- sale prices of all com- modities <sup>2</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com- modi- ties	Com- modi- ties interest and taxes		Dairy prod- ucts	Poul- try and eggs	Meat ani- mals	All live- stock
1934.....	75	76	109	122	128	95	101	89	70	84
1935.....	87	86	117	125	129	103	114	116	116	115
1936.....	103	100	118	124	128	111	125	114	118	120
1937.....	113	117	128	131	133	126	130	110	132	127
1938.....	89	91	115	123	126	125	114	108	115	113
1939.....	109	105	113	121	124	123	110	95	112	108
1940.....	126	119	115	122	125	126	119	96	111	112
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	238	144	182	180	201	162	151	158	173
1943.....	239	305	151	167	162	264	193	190	209	200
1943—August.....	242	312	151	169	164	.....	192	192	208	200
September.....	245	315	151	169	164	.....	195	201	208	203
October.....	247	317	150	170	165	280	198	212	204	204
November.....	247	318	150	171	166	.....	202	219	193	201
December.....	241	316	151	173	167	.....	203	212	194	200
1944—January.....	243	319	151	174	168	275	201	177	194	193
February.....	244	321	151	175	169	.....	201	168	199	194
March.....	241	318	152	175	169	.....	199	162	203	194
April.....	239	313	152	175	169	292	196	151	203	191
May.....	237	313	152	175	169	.....	194	153	201	190
June.....	235	314	152	176	170	.....	192	154	200	189
July.....	233	.....	152	176	170	328	194	165	197	190
August.....	.....	.....	.....	176	170	.....	196	171	201	194

Year and Month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio <sup>1</sup>
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934.....	91	95	159	97	95	89	95	98	90	70
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	105	102	165	95	112	92	104	107	114	89
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	176	67	88	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	96	73	111	88	100	80
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	180	190	179	245	183	192	119
1943—August.....	147	132	326	180	186	202	180	183	192	117
September.....	150	156	315	183	199	205	180	182	193	118
October.....	157	158	335	184	201	195	187	183	194	118
November.....	160	158	347	186	202	196	228	187	194	117
December.....	166	165	349	180	202	208	223	192	196	117
1944—January.....	170	168	350	182	203	204	207	199	198	117
February.....	170	169	348	181	205	206	247	196	195	115
March.....	169	171	351	181	207	215	242	198	196	116
April.....	171	172	353	183	207	237	220	200	196	116
May.....	170	173	350	180	208	232	225	198	194	115
June.....	165	170	350	183	210	228	231	197	193	114
July.....	161	163	350	184	209	230	195	194	192	113
August.....	156	166	355	182	209	214	186	191	193	114

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total Income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

OCTOBER 1944

*A Brief Summary of Economic Conditions*

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FOR THE THIRD successive year the Nation's corn crop will exceed 3 billion bushels, with this year's prospective crop of 3.2 billion bushels setting an all-time record despite a late wet spring and prolonged, dry weather last summer in eastern corn-producing areas. Bumper crops of wheat, grain sorghums and possibly rice, as well as corn, are likely to make this year's total tonnage of all grains at least equal the record 155 million tons produced in 1942. \* \* \* Production of commercial truck crops for fresh market this year will exceed the previous high of 1942 by about 11 percent. The prospective 1.8 billion-pound tobacco crop approaches the previous high of 1939, while record crops of fruits, peanuts and tree nuts are likely. \* \* \* Because of the unprecedented high yield of 285 pounds per acre, cotton production this season is estimated at nearly 12 million bales even though the acreage is the smallest since 1895. \* \* \* The 1945 acreage goals for wheat of 68.6 million acres, or rye of 2.5 million and for dry peas of 450,000 acres total some 71.6 million acres, and are above the 69.8 acres actually planted in 1944 but below the 73.3-acre average in 1937-41 for these three crops. \* \* \* Cash marketing receipts from farm products during the first 9 months of 1944 are now estimated at 13.8 billion dollars, 6 percent above a year ago and double the 1938-42 average for these months.

# Commodity Reviews

## FARM EXPENSES

**F**ARM production expenses are calculated each year primarily to obtain estimates of the annual net income from current operations of farm operators. Net income is derived by subtracting total expenses from gross farm income which is the sum of cash receipts from marketings, Government payments, the value of products consumed on the farm where produced, and the rental value of the farm dwelling.

Separate estimates are made for more than 30 major categories of farm expenses each year. In 1943 four categories accounted for about 40 percent of total expenses: (1) livestock purchases (cattle, calves, sheep, lambs, hogs) (2) feed purchases, (3) fertilizer and lime, and (4) cost of operating motortrucks, tractors, and automobiles for business use. Part of the expense of automobile operation is allocated to the farm family rather than to the farm business and, accordingly, this part is excluded from farm production costs.

Expenses for fertilizer and lime include the value of amounts distributed by the Agricultural Adjustment Agency and the Tennessee Valley Authority as well as purchases from commercial firms. A substantial part of the Government payments included in gross farm income represents payments made to farmers for performing certain approved practices requiring outlays for fertilizer, lime, and other supplies. Thus some of the outlay for fertilizer and lime on the expense side of the farm ledger cancels out a portion of the Government payments on the income side.

Total current operating expenses, which include about 20 miscellaneous items, in addition to the four major categories of expense listed above, accounted for just one-half of the total production costs of farm operators in 1943. Typical of these miscella-

neous expenses are: (1) seed, (2) containers, (3) short term interest, (4) dairy and hardware supplies, (5) ginning, and (6) fire, windstorm and hail insurance.

The other major categories of production expense, accounting for one-half of total costs in 1943, are: (1) depreciation of farm buildings, motor vehicles and machinery; (2) farm wages; (3) taxes on real and personal property; (4) farm mortgage interest; and (5) net rent to landlords not living on farms.

Because of the durability of most farm equipment, such as buildings and machinery, and the wide variation in purchases from year to year, depreciation is believed to be a better measure of cost than the actual purchases in that year. Yearly depreciation charges are computed in such a way

Production Expenses and Net Income of Farm Operators, 1943

Item	Amount	Percent of total
	<i>M. Dol.</i>	<i>Percent</i>
Production expenses:		
Current operating expenses:		
Feed purchased.....	2,262	21.2
Livestock purchased.....	732	6.8
Fertilizer and lime.....	425	4.0
Cost of operating motor vehicles.....	724	6.8
Miscellaneous.....	1,203	11.2
Total.....	5,346	50.0
Maintenance or depreciation:		
Buildings.....	680	6.5
Motor vehicles.....	378	3.5
Machinery and equipment.....	374	3.5
Total.....	1,432	13.5
Hired labor.....	1,933	18.1
Taxes.....	448	4.2
Farm mortgage interest.....	271	2.5
Rent to landlords not on farms.....	<sup>1</sup> 1,252	11.7
Total production expenses.....	10,682	100.0
Cash receipts from marketings.....	19,252	84.6
Government payments.....	<sup>1</sup> 672	3.0
Nonmoney income.....	2,814	12.4
Gross income.....	22,738	100.0
Production expenses.....	<sup>1</sup> 10,682	47.0
Realized net income from current operations.....	12,046	53.0

<sup>1</sup> Includes \$75 million in Government payments to nonfarm landlords.

as to approximate the amount that farmers would have had to pay each year if they had replaced, at prices prevailing during the year, the amount of equipment that was used up in the year. The amount spent on actual purchases during each year is also estimated, for the purpose of arriving at the value of the inventory of buildings and machinery subject to depreciation each year.

An excess of purchases over depreciation charges in any year represents a net addition to the farmers' wealth in the form of various types of farm equipment. But an excess of depreciation charges over purchases indicates that farmers have delayed the replacement of equipment and have used up a part of their capital invested in machinery.

Farm wages include cash wages, plus the value of board, lodging and other perquisites furnished to farm laborers, whether living on or off farms. The nonmoney items—perquisites—are included in the production expenses of farm operators because the value of these perquisites such as home-grown food, are included in gross income.

Net rent to landlords not living on farms represents the gross rent to such landlords minus the expenses incurred by the landlords in connection with their farm property. These expenses, such as taxes and building repairs, are included in the appropriate categories of production expense. Rent to landlords living on farms is not included in farm expenses because, while such rent represents expense to one farmer, it is an item of income to another. The net rent to nonfarm landlords includes a small amount of Government payments although it is unusual to find such payments on the expense side of the ledger. This is done because total Government payments, whether to persons on farms or to nonfarm landlords, are included in gross income from farming. The portion accruing to nonfarm landlords must properly be taken out in getting the net income of farm operators.

To estimate the net cash available to persons on farms after farm operating expenses subtract cash expenses from cash income. Cash income is the sum of receipts from marketings and Government payments. Cash expenses are computed from the same list of expenses just described except that actual outlays on buildings and machinery are substituted for the depreciation items, and cash wages to farm laborers not living on farms replace total farm wages. Net cash available to persons on farms, however, is not *net income* because it takes no account of the income which may have been used for improving farm property nor what the farm furnishes for living. The value of home-grown products consumed and the rental value of farm dwellings represent a very significant portion of the income of many farm operators.

At the present time estimates of farm production expenses and of the net income of farm operators from current operations are available only for the United States as a whole.

## DEMAND

THE PRESENT high level of demand for farm products will continue as long as the war lasts, but a few months after the end of hostilities in Europe will see a substantial decline in industrial production and a significant drop in nonagricultural income payments received by individuals.

However, cessation of hostilities in Europe is not likely to be followed very soon by a drop in the demand for farm products comparable to the decline in domestic business activity. Civilian demand probably will be maintained at a high level in spite of a decline in nonagricultural income. Individual savings have increased during the war to several times their prewar level. Consequently, consumer expenditures could be maintained at their present level with somewhat smaller incomes by reducing the

amount currently saved. The need for food and other farm products by foreign countries will help to maintain agricultural exports for a year or more at levels higher than in pre-war years.

## COTTON

**P**ROSPECTS of an early peace in Europe have differing effects on cotton prices in the United States and in certain foreign countries. In Brazil, for example, the end of the European war would seem to hasten the day when the accumulated stocks of Brazilian cotton can move freely into international trade. In the United States, on the other hand, an early peace would appear to lead to widespread cancellation of military contracts for textiles, while providing no offsetting assurance that American cotton will be exported in larger volume.

Between August 18 and September 22, Brazilian cotton prices, Type 5, at Sao Paulo, advanced 1.32 cents, while Middling 15/16-inch cotton in the United States (10 markets) declined 62 points. Even so, on the latter date, Brazilian cotton was only 14.57 cents per pound, or more than 6.59 cents below essentially comparable American cotton.

The competitive position of American cotton is materially improved by the Surplus Disposal Bill which provides for export sales of American cotton at competitive world prices.

## FATS AND OILS

**W**ORLD demand for fats and oils in 1945 and 1946 is expected to be strong in relation to available supplies. This demand will tend to support prices of fats, oils, and oilseeds in the United States at levels higher than pre-war in relation to prices of most other agricultural products. Throughout the 1944-45 season, prices of soybeans, flaxseed, cot-

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January..	181	156	116
February..	184	158	116
March..	192	159	121
April..	197	160	123
May..	194	162	120
June..	195	163	120
July..	193	164	116
August....	192	164	117
September..	193	164	118
October....	194	165	118
November....	194	166	117
December....	196	167	117
<b>1944</b>			
January..	196	168	117
February..	195	169	115
March..	196	169	116
April..	196	169	116
May..	194	169	115
June..	193	170	114
July..	192	170	113
August..	193	170	114
September..	192	170	113

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

tonseed, peanuts, and tung nuts, and prices of the corresponding oils, will be supported at or near ceiling levels through arrangements between Commodity Credit Corporation and processors.

With continued improvement during September in the condition of the cotton crop, the indicated production of cottonseed this year is now 4,953,000 tons, somewhat more than in 1943, despite a 7-percent reduction in cotton acreage this year.

On the basis of the October 1 condition of major oil crops, prospects are good for an output of domestic edible vegetable oils in 1944-45 about as large as in 1943-44. Lard production, however, will be much smaller than in 1943-44, and reductions are expected in output of linseed oil from domestic flaxseed and in production of greases. The total United States supply of fats and oils in 1944-45, including imports and stocks at the beginning of the season, may be around 700 million pounds less than in 1943-44.

## FEED

**I**MPROVEMENT in many crops as a result of favorable August and September weather, particularly in much of those areas which had suffered from lack of adequate moisture earlier in the season, made feed prospects more favorable on October 1 than a month earlier. The outlook is for a new record corn crop, supplies of which normally account for about 60 percent of the total annual feed concentrate requirements of the nation's livestock. Grain sorghum production will far surpass that of any other year, oats production is indicated to be about 4 percent larger than in 1943, but barley production is down about 11 percent from 1943.

Total supplies of feed grains for the 1944-45 feeding year probably will be about the same as the 1943-44 supply, but slightly larger than the 5-year (1938-42) average. The 1944-

45 supply of feed grains per animal unit on farms next January may be 13 to 15 percent larger than in 1943-44, and about the same as the 5-year (1938-42) average, when reserves were being accumulated.

If feeding rates during the 1944-45 feeding year are about the same as in the 1938-42 period, feed grain reserves could be increased moderately above the 11 million tons at the end of the 1943-44 year. The quantity of wheat and rye fed to livestock in 1944-45 probably will be considerably smaller than the record volume fed in 1943-44. The supply of byproduct feeds for 1944-45 may be slightly larger per animal unit on farms than in 1943-44, although a smaller actual production is in prospect.

On the basis of October 1 crop and production prospects, the combined supplies of all feed concentrates—feed grains, wheat and rye for feed, oilcake and meal, animal byproduct feeds, and other mill byproduct feeds—may

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		Sept. 1943	Aug. 1944	Sept. 1944	Parity price Sept. 1944
	August 1909-July 1914	January 1935-De- cember 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.30	1.35	1.35	1.50
Corn (bushel).....do.....	.642	.691	1.09	1.170	1.16	1.09
Oats (bushel).....do.....	.399	.340	.696	.708	.642	.673
Rice (bushel).....do.....	.813	.742	1.63	1.71	1.60	1.38
Cotton (pound).....cents..	12.4	10.29	20.20	20.15	21.02	21.08
Potatoes (bushel).....dollars..	.697	.717	1.34	1.59	1.47	1.23
Hay (ton).....do.....	11.87	8.87	12.90	14.30	14.70	20.20
Soybeans (bushel).....do.....	1.96	.954	1.69	1.90	1.93	1.63
Peanuts (pound).....cents..	4.8	3.55	7.15	7.64	7.51	8.16
Apples (bushel).....dollars..	.96	.90	2.20	2.12	2.06	1.63
Oranges, on tree, per box.....do..	1.81	1.11	2.80	3.01	2.90	1.99
Hogs (hundredweight).....do.....	7.27	8.38	14.10	13.50	13.60	12.40
Beef cattle (hundredweight).....do..	5.42	6.56	11.70	11.70	11.60	9.21
Veal calves (hundredweight).....do..	6.75	7.80	13.40	12.90	12.90	11.50
Lambs (hundredweight).....do.....	5.88	7.79	12.50	12.30	12.10	10.00
Butterfat (pound).....cents..	26.3	29.1	50.4	50.2	50.2	44.4
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.24	3.21	3.26	2.80
Chickens (pounds).....cents..	11.4	14.9	25.2	24.1	23.7	19.4
Eggs (dozen).....do.....	21.5	21.7	41.6	33.0	35.5	40.8
Wool (pound).....do.....	18.3	23.8	40.8	41.7	41.0	31.1

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA Offices.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

be slightly below the 1943-44 supply in total tonnage, but on a per animal unit basis probably will be moderately larger than in 1943-44.

Hay supplies for 1944-45 will be slightly smaller than last year. Supplies are indicated to be as large as or larger than last year in the West North Central and Western States, but smaller in other regions of the country.

**United States Feed Balance, 1937-44,  
Year Beginning October**  
(In million tons)

Item	1937-41 average	1943 <sup>1</sup>	1944 <sup>1</sup>
<b>SUPPLY</b>			
Stocks, beginning crop year <sup>2</sup> .....	17.1	16.7	11.0
Feed grain production:			
Corn.....	72.3	98.1	89.5
Oats.....	18.1	18.3	19.1
Barley.....	6.8	7.7	6.9
Grain sorghums.....	2.2	2.9	4.2
Total production.....	99.4	118.0	119.7
Imported grains, domestic wheat and rye fed.....	4.5	15.6	8.1
Byproduct feeds.....	15.5	18.7	18.3
Total supply.....	138.5	168.0	157.1
<b>UTILIZATION</b>			
Feed grains fed (including imports).....	85.1	106.1	-----
Wheat and rye fed (including imports).....	4.4	13.6	-----
Byproduct feeds fed.....	15.5	18.7	-----
Total fed.....	105.0	138.4	-----
Feed grains for food, seed, industry, and export.....	12.2	13.0	-----
Total utilization.....	117.2	151.4	-----
Total utilization adjusted to crop year basis.....	118.4	154.0	-----
Stocks, end crop year <sup>2</sup> .....	20.1	11.0	-----
Number of grain-consuming animal units on the following January 1.....	Mil. 132.6	Mil. 170.8	Mil. 145.0
Supply of all concentrates per animal unit.....	Tons 1.03	Tons .97	Tons 1.06

<sup>1</sup> Preliminary—subject to change as more data become available.

<sup>2</sup> Stocks of corn Oct. 1, oats July 1, barley June 1, sorghum stocks not reported. Includes stocks on farms, at terminal markets, and in CCC bins.

## LIVESTOCK

**W**AR Food Administration announced September 15 that the previous support price for hogs of

\$12.50, Chicago basis, for the period October 1, 1944, to March 31, 1945 would continue until June 30, 1945. There will be no change in the ceiling price for live hogs prior to June 30, 1945. Ceiling prices are on the basis of \$14.75 at Chicago for hogs weighing up to 240 pounds and \$14.00 for hogs over that weight.

Number of cattle in feed lots in the midsummer was much smaller than a year earlier and the smallest in 7 years. However, shipments to feeding areas have been larger during the summer than a year earlier, with the number of cattle to be fed this fall and winter indicated to be a record or near record. In the Western Corn Belt, the principal cattle feeding area, where crop yields and pastures are very good, larger numbers probably will be fed than a year ago.

Supplies of well finished beef will remain relatively small in relation to the strong demand for it throughout the remainder of the year at least. Even with an increase in cattle feeding, and a continuation of the feeding of cattle for shorter-than-usual periods, marketings of fed cattle will not materially increase in volume until late winter and early spring.

## DAIRY PRODUCTS

**F**ROM October 1 until flush milk production next spring, butter manufacturers will not be required to set aside any butter for sale to Government agencies.

Butter production during the first 8 months of 1944 was 12 percent below the corresponding period in 1943 and 9 percent below the 1935-39 pre-war average. With civilian cold storage stocks of butter on October 1 about half the 1939-43 average and with production probably continuing at a low ebb, per capita civilian consumption in the last quarter of 1944 will be at the lowest levels for over a half century.

Total milk production on farms for the first 9 months of 1944 was 93.0 billion pounds compared with 93.2 billion for the same period in 1943.

Supplemental dairy production payments for drought relief have been designated in areas in 25 States. Winter rates for the dairy production payments, together with the supplemental payments for drought areas, will range from 60 to 90 cents per hundred-weight for milk and 10 to 11 cents per pound for butterfat. These winter rates will help dairymen meet higher feed costs and will result in more favorable milk-feed and butterfat-feed price ratios than last year. Thus smaller declines from peak milk production than last year are expected.

## TOBACCO

**I**MPROVED weather during late August and September greatly enhanced the tobacco outlook from both the immediate and the longer-range viewpoints. Production in 1944 is equal to disappearance for the first time in several years. Stocks are somewhat below normal in relation to demand, but with the large 1944 crop (now placed at 1,805 million pounds), the indicated supply is about the same as a year ago, with no further reduction of stocks for domestic use anticipated.

Domestic consumption of tobacco is expected to continue near the present high level for at least another year, and exports are likely to increase somewhat over 1943-44. Governments of the liberated countries own outright a considerable quantity of tobacco stored in this country, and as soon as conditions permit, this tobacco is likely to be exported. Furthermore, European stocks are low and since tobacco is a major source of revenue, financial arrangements are expected to be made to purchase additional quantities.

Demand for flue-cured tobacco, the only type now being sold by farmers,

continues strong, with prices paid growers above the high level of last year.

In view of the high level of domestic consumption and the improved outlook for exports, it appears that larger acreages of most types of tobacco could be grown in 1945 and sold at profitable prices.

## VEGETABLES

**P**RODUCTION of commercial crops for fresh market shipment in 1944 will be the largest on record, probably exceeding the previous high of 1942 by approximately 11 percent, according to estimates based on October 1 condition.

Although the index of truck crop prices for fresh market was lower during most of the first part of 1944 than in 1943, they averaged about 44 percent higher for the first 9 months of 1944 than for the same period in 1942. For the remainder of 1944 it is probable that the truck crop price index will tend to approximate the 1943 level, which would be about one-tenth higher than for the same period of 1942.

Production of commercial truck crops for processing, according to October 1 condition, will be around 9 percent larger than in 1943 but about 5 percent smaller than the record crop of 1942.

Potato production in the intermediate producing States is the smallest on record, with prices received by farmers on September 15 the highest for this month since 1920. The October 1 estimate for the 30 late States of 303 million bushels is the second largest late crop since 1935. But if non-civilian requirements continue as high as are now indicated, the per capita supply of potatoes for fresh consumption for the 1944-45 season will be somewhat below the pre-war 1935-39 rate of consumption.

The sweetpotato crop, estimated at around 73 million bushels on October



1, is about 9 percent larger than the 10-year (1933-42) average.

This year's dry edible bean crop is now expected to be about 19 percent less than the 1943 crop but about one-eighth larger than average. The dry field pea crop is also estimated to be smaller than last year's crop by about 18 percent, however, it is nearly three times as large as the 10-year (1933-42) average production.

## FRUIT

**P**LENTIFUL supplies of fresh deciduous and citrus fruits plus sustained high consumer demand characterize the 1944-45 fruit season.

Aggregate tonnage of the eight major deciduous fruits is indicated to be about one-fifth larger this year than last. Of the deciduous fruits marketed in large volume at this time of year, the commercial apple crop is about two-fifths larger than the short crop last

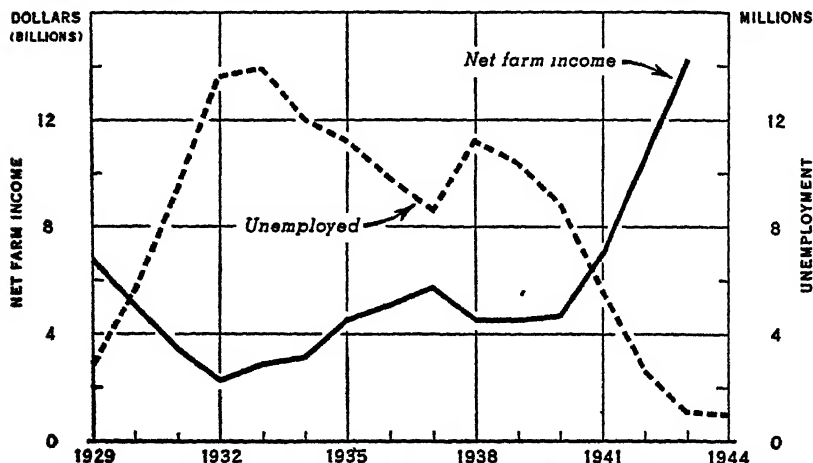
year, pears about one-fifth larger, with grapes slightly smaller.

The 1944-45 crop of citrus fruit, which is just starting to move to market, is expected to be fully as large as the record large crop last season.

According to present estimates of total supplies and requirements, civilians will receive about one-fifth to one-fourth more of fresh deciduous fruits and canned fruit juices than last season, but slightly smaller quantities of canned and dried fruits.

Prices received by farmers for fruits at the beginning of the 1944-45 season generally were at record high levels, slightly higher than a year earlier and more than twice the 1935-39 average. They declined seasonally during late summer and early fall, mostly in reflection of increasing market supplies of deciduous fruits from this year's large crop. Seasonal increases in prices for deciduous fruits in late fall, after the conclusion of the harvest season, seem probable.

**RELATIONSHIP BETWEEN NET FARM INCOME AND NUMBER OF PEOPLE UNEMPLOYED FOR THE PERIOD 1929-44 INCLUSIVE\***



\*FROM U. S. A. AND DEPARTMENT OF COMMERCE PUBLICATIONS. DATA FOR 1944 ESTIMATED BY THESE AGENCIES

# Penicillin Production and Agriculture

**P**ENICILLIN is the name of the remarkable new drug so successful in the treatment of wounds and infectious diseases common to the war. It has already saved the lives of thousands of men and will save the lives of thousands more before the war is over. It has been called the outstanding medical development of this war and considered so valuable to the armed forces that until recently virtually all production has been requisitioned for military use. It is as important in its field as the sulfa drugs are in theirs, and the number of lives saved since their discovery a few years ago is well known.

The remarkable properties of penicillin are due to its ability to kill bacteria. In certain infections it kills the causative organisms, or stops their growth entirely, without harmful effect on the patient. It is not, however, a cure-all, since it is not effective against all types of infection.

## Brings Immediate Relief

Among the diseases known to be routed by penicillin are osteomyelitis, pneumonia, gas gangrene, and gonorrhea. It cures certain types of infection against which the sulfa drugs fail. Penicillin is being used with great success in the treatment of infected wounds. One of the most dramatic effects of the drug is the almost immediate relief from pain that it affords.

Penicillin is administered externally, in the case of wounds or surface infections, or by injection, but is ineffective when taken by mouth. The amount required for a cure ranges from 100,000 to 150,000 units for gonorrhea to a million units or more for most other infections.

Although comparatively new, penicillin came into the limelight so fast most people already have heard about it. But the general public is not aware that the production of this new drug

is linked up with agriculture. Penicillin is produced by a mold that lives on a diet composed almost completely of agricultural products and gets its name from that mold: "penicillium notatum." This particular mold is just an ordinary green-colored micro-organism resembling the mold sometimes seen on bread, cheese, and other household products. The mold grows easily but does not yield worthwhile quantities of penicillin unless maintained under ideal conditions and fed on the proper diet. Producing penicillin is certainly not a household task. It's a laboratory job that must be done by trained scientists under carefully controlled conditions.

## Discovered in 1929

The observations which led to the discovery of penicillin were made in 1929 by Alexander Fleming, a British scientist. Ten years later H. W. Florey of Oxford University produced enough penicillin to determine clinically that it was one of the greatest microbe destroyers ever encountered, but the yield of the drug was so low its production on a commercial scale was simply out of the question. The great need for this drug in the war caused British scientists to bring the penicillin problem to the United States during the summer of 1941 in the hope that our method of doing things on a big scale might be applied to the production of penicillin. And it was.

Soon after their arrival in America, the British scientists were sent to the Bureau of Agricultural and Industrial Chemistry's Northern Regional Research Laboratory at Peoria, Ill., which has one of the largest collections of industrially important micro-organisms in the world and a research group with years of experience in the field of industrial mold fermentations. The upshot was that important discoveries were made from the research program set up to study the penicillin production problem.

Scientists in the Peoria Laboratory set out first to increase the yield of penicillin in the hope of getting commercial production started as soon as possible. The mold was fed on a new diet made from the steeping liquor obtained in the production of corn starch by the wet-milling process. There are large quantities of this liquor commercially available at a low price. Some of it is used in making yeast, but because there is little or no other use for it, most of it goes into cattle feed. The scientists found also that the mold preferred, in addition to the corn steep liquor, some lactose, the sugar present in cow's milk—another agricultural product. This new diet, and improved growing conditions, plus the use of better strains of molds increased the yield of penicillin more than 100 times and in a comparatively short time. This made it possible for industry to take over and start production on a commercial scale.

### Two Mold Methods Used

There are two main methods used in the production of penicillin—the surface method and the deep-tank method. In the surface method the mold is grown in shallow pans or even 2-quart size milk bottles, stacked side by side and on top of each other. In this method the mold simply floats on top of the solution.

In the deep-tank or submerged method the mold is grown in large tanks deep under the surface, and stirred with mechanical agitators while air is pumped in. Tanks in some of the commercial plants hold as much as 12,000 gallons. The surface method is the one used by the British scientists and the one that was used at first in the experiments at the Peoria Laboratory. The deep-tank method is the outgrowth of the deep-tank fermentation research pioneered by Department scientists for more than 15 years. Most of the penicillin being produced today is made by the deep-tank or submerged method.

Based on the improved fermentation methods developed at the Peoria Laboratory, the commercial production of penicillin is now under way in 21 chemical and pharmaceutical plants in the United States and Canada. These plants have been rushed to completion and represent an investment of more than \$20,000,000. Owing to its contributions and leadership in developing the fermentation processes, assay techniques, and procedures in isolating and purifying the drug, the Northern Laboratory has become a sort of clearing house for consultations and instructions in the manufacture of penicillin.

Consulting services have also been furnished to scientists of the other Allied Nations. Visits have been exchanged with English workers, and the art of making penicillin has been taught to Canadians, Australians, Chinese and Brazilians. One Australian Army officer, after spending some time at the Northern Laboratory, was producing penicillin in quantity within 7 weeks after he returned to his own country. Part of this penicillin is said to have been made available to our troops in the Southwest Pacific on a reverse Lend-Lease basis.

### Output Million Times Greater

The penicillin production record speaks for itself. During all of 1942, production probably did not exceed 100 million Oxford units—an arbitrary standard for measuring the germ-killing powers of a penicillin preparation. Production during the first 5 months of 1943 amounted to slightly more than 400 million units while an equal amount was produced in the following single month of June. After that, production nearly doubled each month and climbed to 9 billion units in December of '43, 12 billion in January of '44, 19 billion in February, and 40 billion in March.

Production by the end of this year should be around 200 billion units a month, which is enough to treat about 250,000 serious cases of infection. At

present the amount of penicillin available for civilian use depends on how much is required by the armed forces. They get first call. But production is increasing at a rapid rate and more penicillin is being allocated for civilian use every day . . . in fact, 2,100 hospitals are now receiving it. The price has dropped from \$20 per hundred thousand units to \$3.25, a reduction of 84 percent in a year, and it will undoubtedly go lower as production increases.

The basic fermentation process developed at the Northern Laboratory is being used by all but two of the present commercial producers of penicillin. This process, based on the use of corn steep liquor and milk sugar, has paved the way for large-scale commercial production. There is plenty of corn steep liquor, but it has been necessary to more than double the output of milk sugar to meet the

demand for this product due to its wide use in the production of penicillin.

The commercial production of penicillin represents an entirely new industry based on agricultural products that was not even in existence 2 years ago. It involves a new source of annual income of more than \$50,000,000, some of which will indirectly find its way back to the farm. This monetary evaluation is in addition to the immeasurable value of the research which led to the commercial production of this remarkable drug and the part it is playing in saving human lives. It is one of agriculture's outstanding contributions to the war and a development that will live to benefit humanity long after the world is at peace.

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## Post-War Outlook for Wheat

THE WAR increased the use of United States wheat tremendously—from an average of 720 million bushels during the 10 years 1932-41 to nearly 1,300 million bushels in 1943-44. This increase reflected vast quantities used for feed and industrial alcohol in addition to a moderate increase in food use. With a production in 1943 considerably below the large consumption in that year, carry-over stocks were reduced from about 600 million bushels July 1, 1943, to about half that quantity a year later, and in addition over 125 million bushels were imported. The large crop in 1944, however, is expected to cover a continued large consumption without further reducing the carry-over on July 1, 1945.

If the announced acreage goal is achieved in 1945 and yields are average, a crop of about 850 million bushels would be obtained. The size of the wheat disappearance in 1945-46 will

depend to a great extent on the progress of the war, but a crop of this size together with a limited reduction in carry-over would be expected to cover requirements.

### Adequate 1946 Carry-Over

Carry-over stocks July 1, 1946, may be reduced to between 250 and 300 million bushels. A carry-over of this size, however, would still be large enough to provide a sizable reserve against a year of small yields, which may be expected as yields since 1939 have been above average. From the foregoing it appears that when the war terminates the United States may have a carry-over greatly reduced from the 632 million bushels in 1942, but at the same time large enough to provide a reserve for small yields in addition to necessary operating stocks.

Post-war domestic requirements for United States wheat will depend considerably on the quantity of wheat

fed or used for industrial purposes. Before the war when total disappearance for domestic uses averaged about 675 million bushels annually, about 115 million bushels were used for animal feed, most of which was fed on farms where grown. This could be increased under a program which proved a cheaper price for wheat used for feed than for food. Before the war the quantity of wheat used for industrial purposes was negligible, but after the war significant quantities may be so used.

### **Trade Policies Affect Exports**

The export outlook involves two important aspects. One of these has to do with the volume of international trade in wheat and the other with the price of wheat in the United States as compared with the export price in other countries. International trade prospects will depend on many things, among which are adjustments in trade restrictions and general trade policy among importing nations. In the twenties before European countries drastically restricted their wheat imports, world trade and the United States exports were very much larger than in the following years. Our share of total exports will depend largely on the method adopted to meet competitive prices in other countries.

Income from wheat sales in 1943 was over 900 million dollars, and for 1944 is expected to be fully a third larger and the highest since 1920. The large income in 1943 chiefly reflected good prices; that of 1944 is the result of large production as well. Prices in these two years are double the average for 1931-40.

The Agricultural Adjustment Act of 1938 as amended by the Stabilization Act approved October 2, 1942, provides price-support loans to cooperating farmers at 90 percent of parity on wheat harvested before the expiration of the 2-year period beginning the first of January following the official proclamation that hostilities have ceased. Such loans would serve to maintain

income to wheat growers in the years immediately following the war.

### **Largest World Stocks**

World stocks of wheat in the present war have been very large in contrast with supplies in World War I. Supplies in the four principal exporting countries on July 1, 1943, which in the 1930-39 period represented 80 percent of the total July world stocks excluding Soviet Russia and China, totaled 1,750 million bushels—an all-time record high. On July 1, 1944, they were down to about 1,170 million bushels and on July 1, 1945, they may be moderately lower. However, such stocks would still be greatly above the 1935-39 average of 457 million bushels.

The reduction in July 1 stocks in the four countries, amounting to about 580 million bushels, is the greatest single-year change on record. It results in part from the smaller 1943 wheat harvests in the four countries and in part from the extraordinary demand for wheat for nonfood purposes. Virtually all of the decline occurred in North America—300 million bushels in the United States and 200 million in Canada. Some reduction has taken place in Argentina's stocks, but they are still near the record level of 1943. A moderate decrease is indicated for Australia as a result of the small 1943 harvest.

Of the total stocks in the four countries of 1,140 million bushels, about 700 million bushels may be considered available for export during 1944-45. However, little if any of this supply may be needed. Unless abnormally large shipments are required by Europe during the year, the surplus in prospect from the 1944 production in the four countries should go far toward meeting world import requirements. Accordingly total carry-over stocks and their indicated surplus position on July 1, 1945, would not differ greatly from the July 1 position in 1944.

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# Farm Land Market After the War

**T**HE YEAR or two following the cessation of hostilities in Europe is likely to be the critical period of the World War II farm real estate market. During this time the land value inflationary pressures will probably reach their greatest strength and by the end of the period should be receding.

In case a high degree of optimism and enthusiasm develops, all conditions essential for a full fledged land boom are likely to be present shortly after the end of the European War. This will be particularly the case if high farm income levels continue, as the result of Government price support programs, a high domestic demand, and the meeting of foreign relief needs.

## Demand Becoming Stronger

In addition to high farm incomes, there will be a large and possibly growing volume of purchasing power in the hands of prospective buyers. Keen competition for loans among lenders and increased equities available for use as security indicate the potentialities for a greatly expanded use of credit to finance the sale of farms. With high rates of current returns on land, almost record low interest rates and limited alternative investment opportunities, the purchase of farm land will be attractive to others as well as farmers.

A number of stimulating influences connected with demobilization will be added to the above forces that are already operating. With the return of servicemen and war workers in increasing numbers, the demand for farms will expand. As supplies of labor, machinery, fuel, fertilizer, and other materials are increased and various wartime obstacles to production alleviated, purchases by both farmers and investors may be greater. The incentives for investing current savings or even maintaining accumulated savings in non-inflationary types of investments will be reduced.

At the same time, a supply of farms

sufficient to meet the probable demand is likely to be available only at rather sharply increased prices. The most readily available sources of supply are rapidly being depleted. Outside of a few areas, creditor agency holdings have largely been liquidated and are no longer a significant factor in the market. It is also probable that the bulk of the estates where settlement was postponed because of low land prices have now been sold, and the future supply from this source will be limited largely to those currently created.

## Inflated Values But No Boom

Many more farmers have been selling to retire because of the advance in values the last few years. Sales by farmers in 1943 were more than double the number in 1940. There will still be a large number of owner operators of retirement age with sufficient financial resources to retire following the war but unless land prices are high, sales by this group may be limited. Some may turn their farms over to children, others with reduced production difficulties may continue to operate, while many may rent rather than sell. As long as current returns on land are higher than on most other investments available to land owners, farmers and landlords are not likely to sell except at their own price. It would appear probable that the land market for some time following the war would continue to be essentially a seller's market, characterized by many buyers competing for a limited supply of offerings.

This rather imposing array of powerful stimulating forces may push values to inflated levels in many areas, yet a full blown land boom such as followed World War I may not develop because of the absence of a greater degree of confidence and optimism in future land values than currently prevails. More cautious attitudes than those of a quarter of a

century ago should prevent the market from reaching the runaway boom stage, characterized by frequent re-sales, intensive speculative activity, sales at prices bearing little relation to even high current earnings, and generally optimistic expectations.

A number of forces will operate in the direction of replacing attitudes of restraint still prevailing by those definitely more optimistic. Many characteristics of the current land market are such as to generate a bullish outlook. In addition, a number of expectations already influencing many buyers could become more widespread and further undermine cautious attitudes. Some expect that: (1) the Government will continue price support programs in the longer post-war era and prevent serious declines in farm prices; (2) that lower interest rates are here to stay and hence lower capitalization rates and higher land values are justified; (3) that the world food needs for rehabilitation and adequate dietary standards are such as to require a high level of production; (4) that a

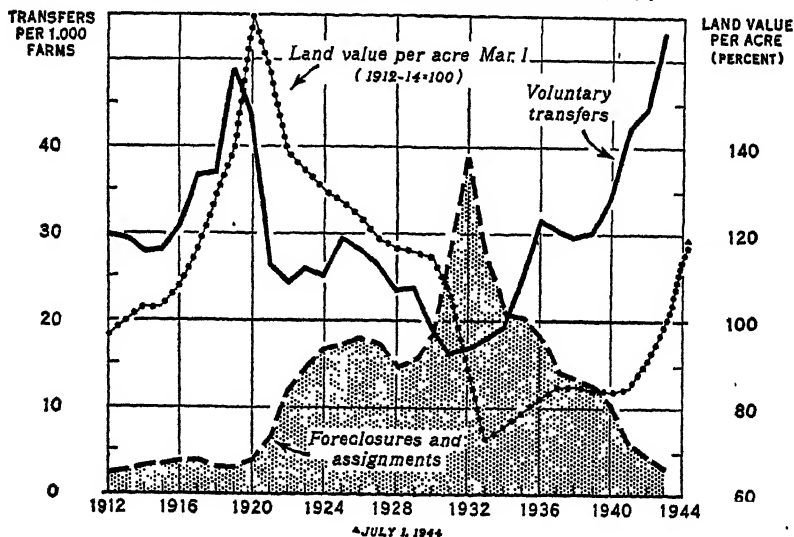
condition of full employment will sustain higher value levels than those now prevailing; and (5) that an inflated general price level after the war is probable, because it cannot be avoided or because it may be necessary in order to service the national debt.

Many of these are reminiscent of types of expectations that prevailed during the land boom of World War I, while others are new. Of these views, the expectation of a substantial degree of monetary inflation following the war is the one having the greatest possibilities for seriously breaching restrained value attitudes. Such an expectation might lead to widespread buying as an inflation hedge in the belief that money rents and values will rise with the general price level.

#### Many Remember 1921 Crash

Operating in the direction of maintaining reasonably cautious attitudes and a guarded outlook on land values will be a number of rather widely held opinions and beliefs that appear thus far to be fairly well entrenched. The recollection of the last land boom and

**VOLUME OF FORECLOSURES AND ASSIGNMENTS, VOLUNTARY TRANSFERS, AND INDEX NUMBERS OF VALUE PER ACRE OF FARM REAL ESTATE, UNITED STATES, 1912-44**



its disastrous consequences has made both buyers and lenders wary of wartime farm product and land prices. Departures of current land prices from long term earning capacity values are recognized and the danger of going heavily into debt to buy land at present prices is appreciated by many. Most potential buyers, particularly farmers, are still acutely aware of the serious agricultural surplus problems prevailing before the war and with an expanded productive capacity expect their reappearance shortly after the end of hostilities. A recent survey in the Corn Belt indicates that a substantial majority of farmers believe that land values are already at or beyond levels that will allow a farm to pay out; that in case of purchase very heavy down payments should be made; that land prices will fall after the war; and that the present is a poorer time than later to buy a farm.

With prevailing land prices already considered above normal levels in many areas, conservative beliefs may become more firmly held as the end of the war approaches and the limited number of remaining high income years taken into account. In case farm product prices in the immediate post-war period are dependent largely on war-connected Government support programs, such views may be further strengthened. Educational and informational programs of Federal and State agencies are encouraging the continuation of cautious attitudes.

### **Cautious View Still Dominates**

The activities of those holding optimistic views may be sufficient to cause continuing value increases for some time following the war, although the land market is not likely to go on a rampage as long as the majority of farmers continue to hold present cautious attitudes. However, the stability of such conservative views remains to be proven. They might change rather quickly should: (1) agricultural commodity prices press on ceilings rather than floors for a year or more

following the war, or even appear capable of being sustained by competitive conditions; (2) should the general price level exhibit serious inflationary tendencies; and (3) should buying as an inflation hedge and speculative activity increase in volume.

Developments in the land market up to the fall of 1944 indicate that the attitudes of conservatism have gradually been yielding ground. Many buyers are again over-emphasizing wartime income levels and land values in many areas have already risen above levels likely to be sustained at substantially lower farm commodity price levels. The volume of sales and resales are at high levels. Heavy debts are being contracted to purchase farms in a significant number of sales.

### **May Escape Runaway Boom**

But despite the strong inflationary pressures operating, the conservative views are still having an influence, and probably are chiefly responsible for having thus far prevented a runaway land market. A slowing down in the volume of sales during the past summer may indicate a tempering in the demand for land and reflect the continued prevalence of conservative views. Whether this is a lull before the storm, or evidence that the crest is here, is not likely to be apparent for some time. At least momentarily the possibilities of escaping a serious land boom appear more hopeful than for some time. However, because of the obvious strength of stimulating forces operating and the possible instability of the restraining influences, the threat of a land boom will continue until the transition to peace conditions nears completion and economic visibility becomes clearer. Even though another major land boom is avoided during this period, the widespread development of varying degrees of an inflated value condition in the land market would still have serious consequences in the longer post-war era.

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# Nutritive Value of Cottonseed Protein

WARTIME requirements for increased supply of protein foods early focused attention on the use for human consumption of plant proteins of superior nutritive quality. Post-war relief and rehabilitation of the people of subjugated countries present a continuing food problem. One of the important shortages is, and will be for some time, that of protein foods. As a means for meeting this situation attention has been directed to a greater use of the more abundant plant proteins to spare or extend the more scarce proteins of animal origin, such as meat and milk.

As a source of plant protein, cottonseed merits particular attention because of its abundance and nutritive value. Cottonseed meal, the ground residue remaining after removal of the oil from cottonseed, has been long recognized and extensively used by feeders of farm animals as a protein concentrate of high nutritive value.

## Cottonseed Flour on Market

There is now available a partially defatted, wholesome, and palatable cottonseed flour specially prepared for human use. Large quantities of this flour have been shipped overseas for lend-lease use. Its high protein content of 50 percent is exceeded by only a few other foods. The digestibility of cottonseed globulin, which represents the greater part of the seed protein is nearly equal to casein of milk. The total protein of cottonseed flour is as digestible as peas and beans, 80 percent as digestible as meat, and 90 percent as cereals.

The nutritive value of a protein depends primarily on its amino acid composition. Most proteins are composed of about two dozen different amino acids combined in a variety of ways. When we eat proteins we are eating amino acids. Eight of these amino acids are nutritionally essential factors. As with the vitamins, if

only one of the amino acids is lacking or deficient in the diet, satisfactory health and nutrition cannot be maintained.

The protein of cottonseed flour is a good source of the nutritionally essential amino acids. It has a growth-promoting value approximately four and a half times that of wheat flour. It is well suited to supplement the proteins of certain other foods, particularly those of the cereal grains. It is estimated that about 36 percent of the protein used for human consumption in the United States is furnished by cereal grains, chiefly wheat. Wheat flour is known to be deficient in some of the essential amino acids abundant in cottonseed flour. Addition of as little as 5 parts of cottonseed flour to 95 parts of wheat flour produces a mixture containing 16 percent more protein than wheat flour alone, and a protein combination definitely superior in its growth-promoting value to the same quantity of protein from wheat flour.

Use of cottonseed flour offers an effective, economical, and practical way of helping to meet a shortage of protein food for relief in foreign lands. Furthermore, because of its value as a protein supplement, a more extended domestic use of cottonseed flour would raise the nutritional level of the diet of people living in areas where cereals, particularly corn, constitute a major source of protein in the diet. It can be used for food in a variety of ways.

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*Farm Production, Farm Disposition, and Value of Oats, 1909-41, by States.* Processed. 51 pp. Bureau of Agricultural Economics. Washington. July 1944.

Makes available such revisions in farm disposition statistics as have become necessary through revisions in the estimates of production to the census base.

# Do Larger Farms Pay Higher Wages?

**T**HAT larger or more productive farms within an area tend to pay higher wage rates than do the smaller ones is strongly suggested by the findings of a recent study of various aspects of farm wages.<sup>1</sup> Farms with the larger or more profitable operations can better afford to employ higher-grade workers and can outbid for the services of workers of equal capacity when the labor supply situation necessitates it. However, the wage differentials are not as great as are the differences between the larger and smaller units in net income or gross value of production.

Although average wage rates tend to be higher on larger farms than on smaller ones in the same area, there are sharp regional and area differences in the wage level among farms which have the same scale of operations, as measured by the gross value of production or by net farm income. Thus Southern farms in a given gross or net income class have much lower average wage rates than farms in the same income class in other major regions of the United States.

## Skilled Workers' Wages Vary More

The supply of unskilled labor is usually much greater than the supply of labor for farm jobs requiring skill, experience, or responsibility. Hence the wage differentials on farms of different sizes tend to be greater for skilled work than for work requiring little skill or experience. Labor supply and other conditions may offset factors producing wage differentials on farms of different sizes in a particular area.

For example, under some conditions piece rates for a certain operation may be lower on the larger farms than the smaller. Yet higher yields or better cultivated fields or greater acreages

can result in higher total or daily earnings per worker at a lower piece rate than the earnings obtainable from a higher piece rate on some smaller farms. Or the supply of workers for certain jobs may be so ample that there would be little incentive for some farmers to pay higher wage rates. Other factors such as better housing or a greater amount of perquisites furnished may also operate to influence the cash wage rates and thereby minimize wage differentials among farms of different size. Also in the special situation where minimum or maximum farm wage rates are set by Government agencies, there is a tendency for wage differentials to be reduced or disappear.

## When Larger Farms Pay More

One survey of farm wage rates made in New York, Nebraska, Colorado, Oregon, and North Carolina during 1942 showed that in each of these States the median wage rate per month with board on farms in the largest size class was higher than the wage rate for farms of all sizes. Acres in cropland was the only criterion of size of farm used in this study and the data were too limited to permit examination of variation in wage rates among the different types of farms within the same size class.

In New York State, where the farms surveyed were predominantly dairy, there was the closest positive correlation between the monthly wage rates (with and without board) and size of farm. During June 1942, the median wage per month with board on New York farms with 200 or more acres of cropland was 32 percent above the median wage for farms with less than 50 acres. In the other States the rise in average wage rates on farms with successively larger acreages showed some irregularities. Undoubtedly type-of-farm differences tend to obscure the relationship of the level of wage rates

<sup>1</sup> *Wages of Agricultural Labor in the United States*, Bureau of Agricultural Economics, September 1944

with the size of enterprise when comparisons are possible only on a crop-acre basis.

The same survey provided information on day rates with and without board paid on farms of different sizes in Arkansas and North Carolina in June 1942. No clear trend is apparent in the case of Arkansas. Although the trend is somewhat irregular in North Carolina, there is a suggestion of a negative correlation of the day rates with size of farm. This may be partly due to the inadequacy of crop acres as a measure of size of enterprise for comparisons involving, as in the case of North Carolina, cotton and tobacco farms where a given cropland acreage may mean quite different scales of operation. Other factors may be the presence on larger farms of other inducements to workers, such as employment for somewhat longer periods, better field conditions making the work easier, and possibly such conditions as the workers' preference for working in groups, and some perquisites.

In Arkansas, the day rates in June were heavily weighted by payments to the most unskilled class of workers—the hoe hands, cotton choppers, etc. With an abundant supply of such labor in the South, there was no necessity for one group of farmers to pay more than another group for workers to do this kind of work. Consequently no marked differences appeared in the median wage rates for farms of different size.

Because day rates are generally paid to seasonal workers and monthly rates principally to the permanent and more skilled group of workers, the greater wage differentials on farms of different size in the case of monthly wage rates reflect the more limited supply of regular than of seasonal workers.

### Higher Wages for Same Work

The clearest example of the tendency of larger farms to pay higher wage rates was provided by a survey of dairy farms in the Los Angeles milkshed. Wage rates in this area of

intense competition for workers were probably among the highest in the country. In the fall of 1942 average monthly wage rates for two types of dairy workers in the dry-lot area of Los Angeles County were as follows:

Monthly Wage Rate

Size of dairy	Hand milker and stripper	Ma- chine milker
All sizes	\$179	\$209
Less than 50 cows	130	-----
50-99 cows	171	202
100-199 cows	181	204
200 or more cows	204	215

These figures indicate that even within a given area and type of farm, wage rates for the same type of work were higher on the larger farms. Such a spread in wage rates for the same type of work was in part due to the wartime conditions of labor scarcity in the Los Angeles milkshed area and the practice of "bidding up" among dairymen for the experienced workers available. In October 1941, the rate for hand milkers on the largest dairies (200 or more cows) in the dry-lot area of Los Angeles County was only \$10 or 7 percent more than the average of \$137 for all farms, while in October 1942 it was \$25 or 14 percent above the average.

### Average Wages Generally Higher

The average wage rates for all types of workers and modes of payment during 1939 were apparently higher on larger farms than on smaller farms. Estimates developed from Census data for farms classified by total value of products indicate that this relationship existed in each major geographic division of the country.

Census data on cash wage expenditures and on employment of hired workers on farms in the different value-of-products classes permitted estimates of the average annual wages per worker (assuming 12 months employment) for farms classified into 13 groups according to value of products sold, traded, or used by farm

households in 1939. The wage cost per worker as estimated represents the amount of wages which would have been paid to a worker had he been employed for 12 months at the average rates actually paid on farms of a given value group. On the great majority of farms, however, considerably less than one man-year of hired labor was used.

For the United States as a whole the estimated cash wage per man-year of hired labor was only \$154 on farms with value of products of less than \$1,000 as compared with \$327 on farms with value of products ranging from \$1,000 to \$10,000 per farm, and \$583 on farms of \$10,000 or more. On the farms with value of products between \$1,000 and \$10,000 there was a gradation in the wage cost per man-year of hired labor from \$256 in the \$1,000-\$2,500 group to \$454 in the \$6,000-\$10,000 group.

#### Wide Regional Differences

Similar estimates for the South Atlantic States showed a gradation in annual cash wage cost per hired worker

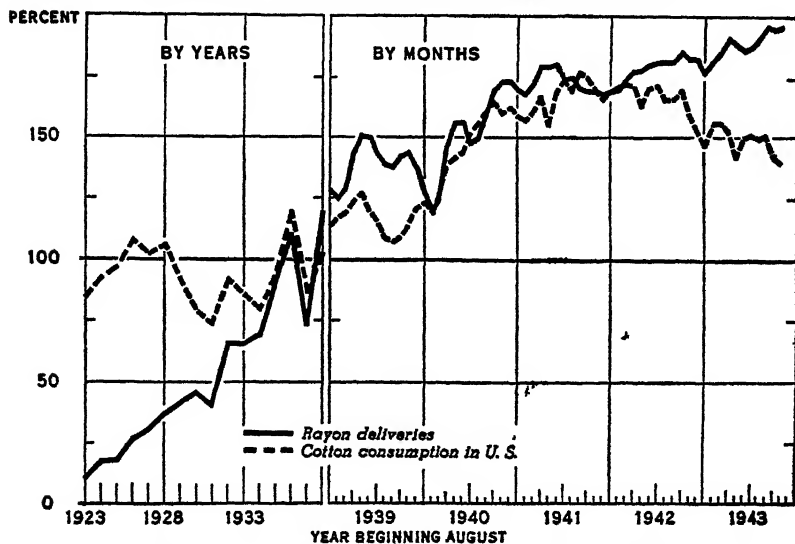
from \$177 in the \$1,000-\$2,500 group to \$404 in the over \$10,000 group. For the Pacific States, the corresponding figures were \$433 and \$868. These differentials among value groups of farms in wage costs per hired worker may reflect other factors besides differences in wage rates for the same type of work. For example, farms with higher average production may employ greater amounts of the types of labor which are generally paid at higher rates. Nevertheless, the differentials are so large as to afford strong supporting evidence that higher average wage rates are paid on the larger farms for a given type of work.

#### Wages Differ Less than Incomes

These differentials in wages among farms of different size of enterprise were matched by even greater differences in farmers' ability to pay wages. Estimates presented in the same study indicate that in 1939 the United States average net income from farming available for family living was \$8,690 for farms with a value of products of \$10,000 and over. This was 16 times as

### COTTON CONSUMPTION AND RAYON DELIVERIES, 1923-43

INDEX NUMBERS (1935-39=100) ADJUSTED FOR SEASONAL VARIATION



great as the average net farm income of \$537 for farms with a value of products of \$1,000–\$1,500. The estimated average total wage cost per man-year of hired labor was \$240 on farms in the \$1,000–\$1,500 net-farm-income class and \$595 on farms in the \$10,000-and-over class—only 2½ times as much. In the South the average net farm income for farms in these value classes rose from \$670 to \$8,000, and the average wages per man-year of hired labor increased from \$240 to \$392.

The influence on the wage rate level of other factors besides the net income from farming operations is indicated by the marked regional differences in the annual wages per worker on farms at

similar net income levels. Thus, for example, farms in the West with a value of products of \$6,000 to \$10,000 realized a net farm income in 1939 averaging only 10 percent more than the net for farms in the South in the same size class. But the average wage cost per man-year of hired labor on these Western farms was over 100 percent more than on the Southern farms. Differences in the supply of available labor, in the types of labor used, in the availability of nonfarm employment opportunities, and in the level of non-agricultural wage rates are some of the factors producing these regional differences in the level of farm wage rates.

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## What Do Farmers Expect After the War?

WHEN the shooting stops do farmers expect a depression? How many veterans and war workers do farmers think will return to their own farm communities to live? Do they want price controls and price supports on farm commodities continued? What purchases are they planning to make when wartime shortages are over? And what are they thinking about international relations?

Answers to these and similar questions will be extremely useful in planning peacetime agricultural programs. In an attempt to find out what farmers are thinking about when peace comes, the Bureau of Agricultural Economics recently discussed such questions with 613 farmers in 32 widely scattered counties, broadly representative of the major farming areas of the country. Two-thirds of the heads of rural households interviewed were farm owners, and one-third were tenants and hired workers.

Highlights of the opinions of the farmers interviewed show that:

- Practically all of them expect a depression eventually, but a majority are optimistic about the immediate post-war years.
- A large majority want a continuation of price controls and price supports for at least 2 years after the war.
- A majority definitely expect to make major purchases when wartime shortages are over.
- Most now think that a large proportion of farm-experienced veterans who return to their local farm communities will be able to make a living, if not much money. Nearly all think the Government should help veterans get farms if they want them, or other work.
- A large majority want the school and health services in their communities expanded.
- Three-fourths think the United States should participate in a world association of nations.

Two in three of the farmers interviewed think there will not be a depression during the first 3 years after

the war—and half of these think the country is in for more of a business boom than now. They believe that the need for food by the devastated countries of Europe will maintain the present high demand for agricultural products for at least 2 years after the war. The third of the farmers who expect an immediate depression are largely of the lower-income group, frequently tenants and farm laborers. Farmers over 45 years old are more inclined to expect an immediate depression than are those who are younger.

As to be expected, the hopes of about all the farmers center around a single wish—a continuation of wartime farm prosperity without war. They want present high farm incomes to continue or go higher with expenses, including farm wages, remaining about the same.

### Government Activity

When asked about Government activities in general, two farmers in five say that they should remain about the same as they are now after the war; one in five say they should be expanded; less than one in three think that they should be reduced. The Southeast has the highest proportion of farmers who think Government activities should be expanded; the Northeast and West Coast have the most who think it should be reduced.

While a majority of farmers do not want a sharp reduction in Government activities after the war, it is significant that in no area and among no group did nearly as large a proportion advocate an expansion of Government activities in general as advocate such specific measures as helping soldiers acquire land or guaranteeing floor prices for farm products. But many report that when farmers do not see how else to get things done, they look to the Government for action.

Commented one substantial farm owner and leader of the Northern Plains: "Government activity after the war should be the same as now if the need remains the same. If conditions are like they were during the

depression we'll probably need a lot more Government, but if prosperity continues we may need less."

### Prices and Purchases

Nearly all of the farmers want the Government to continue price supports for 2 years after the war, and a substantial majority want a continuation of price ceilings for like period. "A thing out of control ain't worth nothing," said a Mississippi sharecropper in explaining why he favored continued controls.

Greatest opposition to the continuation of price controls came from the vegetable-growing areas on the West Coast and the upper Atlantic Seaboard where "the law of supply and demand" was most often mentioned by the farmers interviewed. "Just turn prices loose and let supply and demand work them out, anything else is artificial" was a typical comment from the minority who opposed a continuation of price controls after the war.

Three farmers in five report they are definitely planning to make one or more major purchases when wartime shortages are over. One in four plans to buy a tractor or other farm machinery; one in five plans to buy an auto or truck. Next in importance come household furnishings, installation of electrical current and equipment, purchase of farm lands, improvement of farm dwellings and other buildings.

Purchases now planned clearly reflect the farmers' desire to raise their standard of living in addition to making needed repairs and replacements.

More farmers in the Western and Northern parts of the country than in the Eastern and Southern plan purchases as do more of those with high incomes than low.

The families not planning major purchases can be divided into two general groups: (1) those who were most completely equipped with farm machinery and household conveniences when war broke out, and (2) those with such low incomes they have accumulated no

surplus because their increased wartime earnings have been used for current living expenses.

### School and Health Services

Over four in five of the farmers interviewed want an increase of public health clinics, and more than three in four would like to participate in some sort of a flat-rate payment plan to cover doctor, nursing and hospital costs. Reasons given for their interest in such medical plans seemed to be twofold: (1) a growing desire for more adequate medical care than they have been able to obtain in the past; (2) the fear of continued thinning out of doctors in rural areas and small towns which would make medical care less available and more expensive.

A majority of the farmers favor the further consolidation of rural schools though consolidation is still a controversial issue in some areas. Four in five think schools should serve hot lunches after the war, and two in three want the wartime school repair shops continued so farmers can repair their own machinery. Over half think that school systems should continue to maintain centrally located canneries for the convenience of farm families, as some schools are now doing.

### Old-Age Security

When farmers were asked to compare their own worries about being able to support themselves in old age with those of their fathers, the answers show that a larger proportion of non-owners than owners are worrying more. Over half of the farmers in the relatively low-income cotton South region answer "worry more" as compared with less than one-fourth in the higher-income Northern Plains and Pacific Coast areas.

Farmers in low-income areas are more optimistic about their children making a decent living on the farm than they are about their own security in old age. The reverse is true of farmers in high-income areas, where

farmers worry more about the future of their children on the farm and less about their own old-age.

### Farms for Veterans

In the lower-farm-income areas of the country, where the largest proportion of farmers expect a depression and fewest expect a boom, is found the largest proportion of farmers who think that all veterans with farm experience could come back home and make a living, if not much money. Half of the farmers in the cotton Southeast make such a prediction compared with only one-fifth of those in the Corn Belt. Apparently this high estimate in low-income subsistence farming areas stems from the widespread belief that there is always a chance for anyone who cannot do better elsewhere to at least make something of a living on a farm. Quite high also are the estimates of the farmers in the areas where seasonal labor demands are highest, such as the vegetable-growing areas along the Atlantic Seaboard and Pacific Coast.

Most of the farmers think there will be work opportunities for all veterans who return to their home communities, but they are not certain the veterans will be satisfied with the work available as much of it in many areas will be for hired farm labor.

Nearly all of the farmers interviewed think the Government should help veterans get located in the kind of work they want. Nine in ten think the Government should help veterans from farm homes get located on a farm if they want to farm, and three in four think it should help them get off-farm work if they prefer that.

### International Relations

Three farmers in four think the United States should participate in a world association of nations. Typical of the majority who favor U. S. participation in such an association is this comment: "We don't want to get into another war—there must be some way

## SUGAR

to keep out of it." Some think we should participate in order to protect our own interests. Other representative comments are: "Try to get peace even if we have to sacrifice; we'll all be better off if we do it." "We as a Nation can't move along by ourself any more than a man can; we've got to help each other."

"To be fair about it," runs a typical comment of the minority who oppose participation, "it seems like the less we have to do with outsiders the better off we are."

Because of its complexities some farmers did not offer very definite opinions. Not infrequently a farmer would literally catch his breath and say something like, "now that's a hard one," or "that's too deep for me," or "the folks in Washington will have to decide that." Such reactions were particularly common among the lower-income farmers and those who had the least education and were the least read.

### A Word of Caution

By way of emphasis, the reader is cautioned that the sample used in this study was small and therefore the findings can be relied upon only as rough indication of farmer thinking. Furthermore, opinions change quickly, especially in these troubled times, and so in fairness to the farmers interviewed their opinions recorded here can only be taken as a general indication of their thinking at the time of the interviews last spring and summer.

In contrast to some public opinion polls, the interviewers in this survey were usually well acquainted with the farmers they interviewed, having worked with them before on other projects. A large majority of the farmers expressed appreciation that Government representatives had come to the farms to find out from the farmers themselves what they are thinking.

ARTHUR RAPER and U. T. SUMMERS  
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THE CURRENT sugar shortage, particularly in the northeastern part of the United States where consumers are having difficulty obtaining sugar, is the result of a combination of circumstances.

Before the war, the United States imported about one million tons of sugar per year from the Philippines, about one-seventh of the country's annual consumption. This supply has been lost. Also, the domestic crop of sugar beets in 1943 and 1944 has been about one-third less than before the war, an annual loss equal to nearly 500,000 tons of raw sugar. The 1943-44 sugar crop of Puerto Rico was about 250,000 tons smaller than usual. These were major sources of United States sugar.

These losses have been made up during 1944 by increased imports from Cuba and a reduction in sugar inventories in this country. Receipts of sugar from Cuba during the first seven months of 1944 amounted to 2,237,320 tons as compared with 1,577,023 for the corresponding period in 1943.

Total stocks of sugar in the United States on July 31, 1944 were 999,832 tons, in contrast with 1,378,805 tons on July 31, 1943 and an average of 1,498,851 tons during the five pre-war years, 1935-39. Despite this, sugar distribution for consumption in the continental United States during the first seven months of 1944 totaled 3,914,606 tons, raw value. This is 11.7 percent larger than the distribution for the corresponding period of 1943 and almost equal to the record established in 1941.

Sugar supplies in the United States are likely to remain relatively short so long as (1) the Japanese control the Philippines and Java, (2) the sugar beet crops in the United States remain very much smaller than in pre-war years, (3) Europe's need for imported sugar is abnormally large, (4) the demand for sugar in the United States remains at its present high level.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) <sup>1</sup>	Income of industrial workers (1935-39=100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1934.....	75	76	109	122	128	95	101	89	70	84
1935.....	87	86	117	125	129	103	114	116	116	115
1936.....	103	100	118	124	128	111	125	114	118	120
1937.....	113	117	126	131	133	126	130	110	132	127
1938.....	89	91	115	123	126	125	114	108	115	113
1939.....	109	105	118	121	124	123	110	95	112	108
1940.....	125	119	115	122	125	126	119	96	111	112
1941.....	162	169	127	131	132	134	139	121	146	140
1942.....	199	208	144	132	150	201	162	151	183	173
1943.....	299	305	151	187	182	284	193	190	209	200
1943-September.....	245	315	151	169	184	-----	195	201	208	203
1943-October.....	247	317	160	170	185	280	198	212	204	204
1943-November.....	247	318	160	171	186	-----	202	219	193	201
1943-December.....	241	316	161	173	167	-----	203	212	194	200
1944-January.....	243	319	151	174	188	275	201	177	194	193
1944-February.....	244	321	161	175	189	-----	201	168	199	194
1944-March.....	241	318	162	175	189	-----	199	162	203	194
1944-April.....	239	313	162	175	189	292	196	151	203	191
1944-May.....	237	313	162	175	189	-----	194	163	201	190
1944-June.....	235	313	162	176	170	-----	192	164	200	189
1944-July.....	231	306	162	176	170	328	194	165	197	190
1944-August.....	232	-----	162	176	170	-----	196	171	201	194
1944-September.....	-----	-----	-----	176	170	-----	188	179	200	196

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>1</sup>	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops			All crops
1934.....	91	95	169	97	95	88	95	98	90	70
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	108	102	165	95	112	92	104	107	114	89
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	176	67	88	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	96	73	111	88	100	80
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	160	190	179	245	183	192	119
1943-September.....	160	156	315	163	199	205	180	182	193	118
1943-October.....	187	158	335	164	201	195	187	183	194	118
1943-November.....	160	158	347	156	202	196	228	187	194	117
1943-December.....	166	165	349	160	202	208	223	192	196	117
1944-January.....	170	168	350	162	203	204	267	199	196	117
1944-February.....	170	169	348	161	205	206	247	196	195	115
1944-March.....	169	171	351	161	207	215	242	198	196	118
1944-April.....	171	172	352	163	207	237	220	200	196	116
1944-May.....	170	173	350	160	208	232	225	198	194	115
1944-June.....	165	170	350	163	210	228	231	197	193	114
1944-July.....	161	168	350	164	209	230	195	194	192	113
1944-August.....	166	166	355	162	209	214	196	191	193	114
1944-September.....	155	162	353	170	207	206	166	188	192	113

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total Income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# ANNUAL OUTLOOK ISSUE

## THE

# AGRICULTURAL

# SITUATION

NOVEMBER 1944

*A Brief Summary of Economic Conditions*

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THE YEAR 1945 will be the fifth successive year war dominates American agriculture. Even with a European victory early next year the demand for the food and fiber output of American farms will continue at a high level. Military food requirements in the Pacific will be greater than ever, over-all civilian demand is expected to continue above pre-war levels, and foreign relief and export needs may assume large proportions. This demand, together with Government price supports, means farmers will again be assured favorable prices for their 1945 output. But 4 years of record production have brought about record stocks of many agricultural commodities. In some cases

these stocks will exceed probable demand, in others demand will far exceed supply. And so, rather important production shifts are in prospect for 1945. What these shifts are for important commodities and what the general outlook is for agriculture, as it appeared in mid-October, are outlined in the following summaries. These summaries are, for the most part, based upon materials used at the Twenty-second Annual Outlook Conference held in Washington.

## DEMAND—PRICES

**T**OTAL demand for farm products in 1945 will be almost as high as in 1944, with most products selling at prices averaging only slightly below those of 1944.

Reductions in the output of war goods following the end of hostilities in Europe are likely to be accompanied by a decline in the national income because of reduced employment, particularly overtime, in a number of important industries. Consumer expenditures are not likely to drop as much as national income so that domestic demand for many farm products, at ceiling prices, may continue to exceed supplies. Commodities relatively plentiful in 1944 are likely to sell at somewhat lower prices in 1945 if supplies are maintained at levels reached during this past year.

Even though some military and lend-lease requirements for farm products are likely to be smaller in 1945 following the defeat of Germany, food and clothing needed for the rehabilitation of Europe and other areas will tend to maintain exports of agricultural products near present levels.

Nonagricultural incomes in 1945 are likely to be lower than in 1944. The reduction in industrial production following the defeat of Germany will cause a substantial decline in the present payments for overtime work. Also, there will be some shifting of labor from high wage to lower wage industries.

### Farm Prices

Declining demand, together with an unprecedentedly large production of agricultural products in 1944 and a large carry-over of certain products

into 1945, is likely to cause some reduction in the prices received by farmers in 1945. This will, of course, be limited by the Stabilization Act of 1942, which provides for price support programs for most important farm commodities. These commodities have accounted for about two-thirds of cash receipts to farmers in recent years.

Prices of some of the things purchased by farmers, particularly food for family living and feed for livestock, probably will decline. As a result, the 1945 index of prices paid, interest, and taxes is likely to be slightly lower than in 1944.

### Industrial Prices

Prices of semimanufactured and manufactured articles have risen very little in the last 2 years, with the supply of many such articles for civilian use insufficient to meet the demand at present prices. Government price controls will tend to prevent price rises for most products, but such changes permitted by the regulations are more likely to be increases than decreases.

The cost of living in large cities has increased very slowly in recent months. Food costs during the first 8 months of 1944 have averaged 1.8 percent lower than for the corresponding period in 1943, while nonfood costs have been 3.7 percent higher. Food costs probably will be somewhat lower in 1945, but nonfood costs seem likely to rise slightly.

### National Income

National income for 1945 is likely to be somewhat lower than 1944, because of the reduction in Government expenditures following the end of the war in Europe. It is not likely that

production for civilian purposes will be increased as rapidly as war production is reduced; consequently the total national output of goods and services will be lower.

Already there is considerable evidence of a leveling off in the wartime rise in national income. The income for the first half of 1944 totaled 77.5 billion dollars, which is 9.5 percent above the income for the first half of 1943. This is the smallest increase since the beginning of the war and compares with a gain, for the first half of each year, of 28 percent from 1942 to 1943 and 25 percent from 1941 to 1942.

The expenditures of the Federal Government for war purposes during the first half of 1944 were 43.1 billion dollars or 44 percent of the gross national product of the country. War expenditures for the first half of 1944 were nearly 9 percent above the corresponding period of 1943, but the proportion of the gross national product absorbed was nearly the same in both periods.

The gross national output available for private use in the first 6 months of 1944 amounted to 47.3 billion dollars. This is larger than the amount available in the corresponding period of any of the 3 previous years by 2.5 to 3.3 billion dollars. Expenditures for consumer goods and services increased even more than this. Total expenditures for the first half of 1944 were 46.3 billion dollars, 11.1 billion more than for the corresponding period of 1941. Consumer expenditures for durable goods during this period decreased 1.7 billion dollars, but those for nondurable goods increased 10.2 billion and for services 2.7 billion dollars.

R. A. BALLINGER, BAE

## FARM INCOME

**T**OTAL cash receipts from farm marketings in 1945 may drop 5 to 10 percent below 1944. Income from

crop sales is not expected to change materially because a substantial proportion of the large 1944 crop production will be marketed in the first half of 1945, which will help to offset somewhat reduced receipts later in the year if only average yields are obtained. The 1945 decrease in income from livestock and livestock products probably will be much greater, as a decline of about 20 percent in hog marketings is expected as well as a drop of about 10 percent in egg and chicken production.

### 1944 Cash Receipts

Cash receipts from farm marketings are estimated at 19.8 billion dollars for 1944, 3 percent above the 19.3 billion dollars in 1943. Receipts from crops probably will be about 8 percent greater than in 1943, while livestock and livestock product receipts may be slightly less. Largely because of the record wheat crop, food grains are expected to show the greatest gains over last year of any of the crop groups. Receipts from cattle and calves and dairy products will be slightly greater than in 1943, but receipts from hogs, poultry, eggs, sheep and lambs will be down.

Volume of production for sale and home consumption in 1944 will be about 3 percent above 1943. Volume of crops produced will be up 9 percent but livestock and livestock products will show no appreciable change.

### Expenses

It is not expected that 1945 production expenses will differ greatly from 1944. Significant changes may take place, however, among the expense items. The cost of purchased feed may be 10 to 15 percent less in 1945 than in 1944. Relatively large crops of feed grains on hand for winter feeding with shrinking livestock numbers will reduce the need for buying as much feed next year.

The cost of hired labor including cash wages and perquisites, may be somewhat higher because of the higher wage level reached at the end

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	158	116
February.....	184	158	116
March.....	192	159	121
April.....	197	160	123
May.....	194	162	120
June.....	195	163	120
July.....	193	164	118
August.....	192	164	117
September.....	193	164	118
October.....	194	165	118
November.....	194	166	117
December.....	196	167	117
<b>1944</b>			
January.....	196	168	117
February.....	195	169	115
March.....	196	169	116
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114

<sup>1</sup> Ratio of prices received by farmers to price paid, interest, and taxes.

of 1944. Many of the former agricultural laborers and members of farm families now engaged in wartime activities; will go back to farms when the war in Europe comes to a close. They will probably be warmly welcomed by overworked farm operators to assist in maintaining agricultural production at a sufficient level to meet the needs of the armed forces in the Pacific war as well as domestic requirements. The probable increase in availability of labor will tend to check the advance in wage rates.

Some increase in the cost of maintenance and depreciation in 1945 is expected, because the production of farm machinery and motor vehicles for farm use will be stepped up as soon as possible after the end of the war with Germany, with many farmers now financially able to purchase the machinery they need. On the whole, the value of all machinery and equipment on farms probably will increase in 1945 and so will depreciation charges based on current value.

Some rise in charges for depreciation of buildings is also indicated. Outlays for upkeep of farm buildings have been curtailed during the war years, which has resulted in considerable deferment of repairs and building new structures. With the possibility of obtaining larger supplies of labor in 1945 it seems probable that expenditures on buildings may increase somewhat, with resulting increased charges for depreciation.

No significant changes in either property or personal taxes are looked for in 1945, but interest payments will be somewhat reduced because of the relatively rapid reduction of farm indebtedness during the last five years.

In 1944 expenses of farm operators are expected to be higher than in 1943 by perhaps 5 percent. The cost of purchased feed probably is up from 5 to 10 percent as a result of higher feed prices and greater numbers of livestock to be fed.

The cost of hired labor is about 10 percent greater in 1944 than last year. Although employment of hired labor has been lower than 1943, wage rates have been materially higher. The value of perquisites may not be greatly changed as prices of farm products used for home consumption have been slightly higher in 1944 than in 1943, on the one hand, while the number of farm laborers receiving perquisites has been somewhat lower on the other hand.

## Net Income

Net income to farm operators in 1945 probably will be 10 to 15 percent lower than in 1944. Value of home consumption as well as rental value of operators dwellings will be down slightly, and, when added to cash receipts from farm marketings, gross income may be 5 to 10 percent below 1944.

This year net income is not expected to be very different from 1943, though a slight increase may occur as gross income may show a little larger increase than expenses.

H. C. NORCROSS, BAE

## FARM LIVING COSTS

THE amount of money available from current operations for farm family living in 1945, after payment of taxes, may not be as great as in either 1943 or 1944, but probably will be more than in 1942. In addition, farmers will have a large amount of savings to draw on which have been accumulating rather rapidly during the past 4 years. Bank deposits of farmers in the United States on January 1, 1944, of about 6.5 billion dollars were more than double the amount on January 1, 1929. It is also estimated that cash on hand during 1944 was nearly half as great as bank deposits. It is probably safe to assume that accumulated savings on hand in 1945 will be even greater than in 1944. Many farmers are thus assured of ample ability to satisfy their needs if supplies are available.

Many types of household equipment, unavailable or obtainable only

in cases of special need in 1944, may become available in 1945. They include such items as radios, washing machines, sewing machines, vacuum cleaners, mechanical refrigerators, water heaters, and electric fans. While production of automobiles will increase, it cannot be expected that supplies will be sufficient to meet the demand.

The question of how farm families live in 1945 probably will depend more on the speed of reconversion to peacetime conditions than on the financial status of farmers. If output of goods needed for farm living appear on the markets early in the year and production increases rapidly, living conditions on many farms undoubtedly will improve substantially.

H. C. NORCROSS, BAE

## Buy War Bonds

### Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		October 1943	September 1944	October 1944	Parity price October 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel)-----dollars..	0.884	0.837	1.35	1.35	1.42	1.50
Corn (bushel)-----do.....	.642	.601	1.07	1.16	1.13	1.09
Oats (bushel)-----do.....	.399	.340	.744	.642	.659	.678
Rice (bushel)-----do.....	.613	.742	1.74	1.60	1.70	1.38
Cotton (pound)-----cents..	12.4	10.34	20.28	21.02	21.25	21.08
Potatoes (bushel)-----dollars.	.697	.717	1.28	1.47	1.42	1.23
Hay (ton)-----do.....	11.57	8.87	13.70	14.70	15.20	20.20
Soybeans (bushel)-----do.....	1.96	.954	1.80	1.93	2.04	1.63
Peanuts (pound)-----cents..	4.8	3.55	7.05	7.51	7.71	8.16
Apples (bushel)-----dollars.	.96	.90	2.08	2.06	2.05	1.63
Oranges, on tree, per box..	1.81	1.11	2.61	2.90	2.70	1.99
Hogs (hundredweight)-----do.....	7.27	8.38	14.00	13.60	13.80	12.40
Beef cattle (hundredweight)-----do.....	5.42	6.56	11.10	11.60	11.60	9.21
Veal calves (hundredweight)-----do.....	6.75	7.80	13.00	12.90	12.90	11.80
Lambs (hundredweight)-----do.....	5.88	7.79	12.20	12.10	12.20	10.00
Butterfat (pound)-----cents..	20.3	29.1	50.8	50.2	50.3	46.1
Milk, wholesale (100 pounds)-----dollars.	1.60	1.81	3.32	3.27	3.34	2.90
Chickens (pounds)-----cents..	11.4	14.9	24.6	23.7	23.8	18.4
Eggs (dozen)-----do.....	21.5	21.7	45.2	35.5	38.8	43.6
Wool (pound)-----do.....	18.3	23.8	40.6	41.0	40.3	31.1

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

## LIVESTOCK

**D**OMESTIC demand for meat in 1945 is expected to be almost as strong as in 1944. Even though consumer income will decline following the termination of the war in Europe, consumer expenditures for meat are not likely to decline as much as income.

Meat production in 1945 will be about 2 billion pounds smaller than the record 1944 output of over 24½ billion pounds (dressed weight), and probably will continue at about the 1945 level in 1946. But this level will be considerably higher than in the pre-war (1935-39) average output of 16 billion pounds.

Any decrease in demand for meat in 1945 probably will be about offset by the decrease in supplies, with prices likely to hold close to ceiling levels. But, meat prices generally may decline in 1946. The severity of this decline will depend largely on changes in consumer purchasing power resulting from shifts toward a peacetime economy, and on the extent to which military procurement, particularly of beef, may be reduced.

### Hogs

The pig crop in 1943 reached the extremely high level of 122 million head. In 1944 the pig crop was reduced to about 88 million head, but was still the third largest on record. Present indications point to a 1945 pig crop of approximately the same size as in 1944. Pig crops in pre-war years, prior to the extreme droughts of 1934 and 1936, averaged about 78 million head annually.

Because of the time lag between the farrowing of pigs and the marketing of finished hogs, hog slaughter was larger in 1944 than in 1943. Approximately 95 million hogs were slaughtered in 1943, with about 97 million expected to be slaughtered in 1944. There will be about 20 percent less slaughter in 1945 than in 1944.

Hog prices were below ceiling levels

for a considerable period in 1944, reflecting the heavy marketings in the first 6 months of the year. With a much smaller supply of hogs to be marketed during the next 12 months, prices probably will be at or close to ceiling levels during most of the period. Some decline in hog prices may occur in the 1945-46 hog marketing year.

### Beef Cattle

The number of cattle and calves on farms and ranches at the beginning of 1944 probably reached a peak in the cattle numbers cycle. Numbers are expected to be slightly lower on January 1, 1945, than a year earlier, and probably will decline for several years. Accompanying this decline, at least during the next 2 or 3 years, slaughter will continue at a high level as breeding stock is reduced. Total slaughter of cattle and calves in 1944 is now indicated at close to 34 million head, a new record.

Prices of both cattle and calves averaged slightly lower in 1944 than in 1943, reflecting an increased proportion of heavy calves and lower-grade cattle in total marketings. The 1945 prices for cattle and beef, as well as calves and veal, are likely to remain at 1944 levels, but may decline in 1946 if consumer income and military purchases are substantially reduced. Insufficient beef and veal supplies to meet civilian demand at ceiling prices will probably continue in 1945, despite a smaller gap between supply and demand.

The spread between prices of well-finished cattle and feeder cattle was unusually wide in the summer and early fall of 1944. The present outlook is for a considerably larger market supply of grain-fed cattle in the second half of 1945 than in the second half of 1944. High prices of better grade cattle probably will continue for several months, but may decline as market supplies increase in 1945.

### Sheep

Slaughter of mature sheep was unusually large in 1943 and, though some-

what reduced, continued large in 1944. The number of breeding ewes on farms and ranches declined from 37.7 million at the beginning of 1943 to 35.1 million at the beginning of 1944. The number will be further reduced by January 1, 1945, possibly by 2 million head. This declining trend has been brought about largely by more profitable returns from other enterprises, accompanied by scarcity and high cost of labor for handling sheep, and, in the native-sheep States, more intensive use of land. Numbers of breeding ewes may stabilize at the reduced level in 1945, with a smaller lamb crop than in 1944 probable next year. Slaughter of sheep and lambs in 1945 is expected to be 10 to 15 percent less than in 1944. Prices of slaughter sheep and lambs are likely to be maintained near 1944 levels.

The number of breeding ewes on farms and ranches January 1 ranged from 35 to 38 million head during the years 1930-44. A reduction to about 33 million head by January 1, 1945, as

now seems likely, will be a price-supporting factor for sheep, lambs, and wool in the next 2 or 3 years. However, world wool stocks are now very large, and demand for lamb and mutton is likely to decline with the drop in consumer income after the conversion from war to peace.

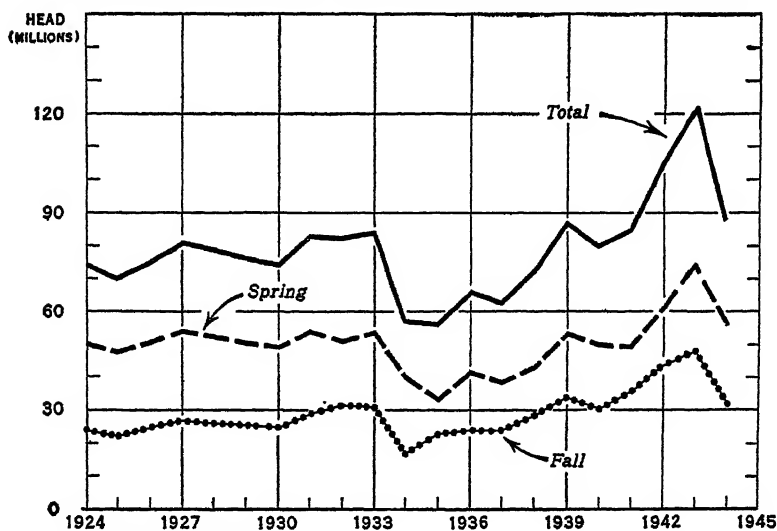
R. M. WALSH, BAE

## DAIRY PRODUCTS

A 119 billion-pound milk output is expected in 1945 if unit returns to dairy farmers, including dairy production payments, are kept at about 1944 levels. This would equal the record output of 1942 and exceed the indicated 1944 production by about 1 billion pounds. With 1 to 1½ percent more cows on farms and the same rate of production per cow as in 1944, attainment of this record is possible.

Because little if any decline in fluid milk and cream consumption is ex-

SPRING, FALL, AND TOTAL PIG CROPS, UNITED STATES, 1924-44



DATA FOR 1944 ARE PRELIMINARY

\*FALL PIG CROP BASED ON SOWS INDICATED TO FARROW AND 1938-42 AVERAGE NUMBER OF PIGS SAVED PER LITTER



pected, the 1945 prices received for whole milk sold at wholesale may not be much different from 1944 prices. The farm price of butterfat, however, which has remained fairly steady for the past two years, probably will show little change.

During 1944, about one-sixth of the 121 billion-pound total milk supply (production plus change in inventory position) went into noncivilian channels. About one-fifth of the butter supply, almost one-half of the evaporated and condensed milk, and about one-third of the cheese supply were used for military and export purposes. It is estimated that if there had been no restrictions on civilian consumption during 1944 the total production of various manufactured products, in addition to the fluid milk and cream sold, could have been absorbed by civilians at prevailing prices.

### Civilian Demand

The 1945 aggregate civilian demand for dairy products is expected to exceed available supplies at prevailing prices even with reduced military and lend-lease purchases. Allowing for a moderate decline in income during 1945, it appears that civilians could consume at present prices approximately the following quantities of dairy products on a per capita basis—about 411 pounds of fluid milk and cream, at least 16 pounds of butter, 7 pounds of all cheese, and probably somewhat over 20 pounds of evaporated and condensed milk. This would mean about the same quantity of fluid milk and cream as in 1944, but increases in the consumption of manufactured products.

But the quantities of dairy products available to civilians in 1945 probably will not be sufficient to meet all of these requirements. A slight decline in the production of creamery butter may continue, but this would be partly offset by increases in the manufacture of whole milk products, especially dried whole milk and evaporated milk. With a continued strong non-

civilian demand, supplies of principal manufactured dairy products, especially butter, probably will still fall short of meeting civilian needs. But supplies probably will be about sufficient to satisfy the civilian demand for fluid milk and cream.

### Feed Supply

In view of the record corn crop and a decline of about 13 percent in grain-consuming animals in 1945 from 1944, feed supplies appear ample for dairy producers. The amount of grain available for grain-consuming animals is estimated to be 1.06 tons per animal unit, slightly below the record in the 1942-43 season. If returns received by dairy farmers remain about the same in 1945 as in 1944 a favorable dairy feed-price ratio compared with a long-time average could be expected.

GERSON LEVIN, BAE

## POULTRY AND EGGS

FARM EGG production in 1945 may decline 8 to 12 percent below 1944 output because the number of layers on farms January 1, 1945, is expected to be 7 to 10 percent below January 1, 1944, numbers. During 1944, egg production on farms reached a new record of 4.7 billion dozen, 4 percent above the previous record of 1943 and 55 percent above the 1935-39 average production. Despite the expected decline in production more eggs probably will be available for civilians in 1945 than in 1944, when the per capita consumption reached a record, now indicated at 347 eggs. This may result because of significant declines in lend-lease requirements for dried eggs.

Prices received by farmers for eggs in 1945 will be slightly lower than in 1944 because more eggs will be available in domestic channels. But because eggs are a "proclaimed" commodity under the Steagall amendment, heavy price declines are not anticipated. During 1944 the price received by

farmers probably will average about 33.8 cents, 93 percent of parity.

### Chickens

Production of chickens, excluding broilers, may be appreciably less in 1945 than in 1944 because of a reduced number of layers on farms at the beginning of the year. Since 1945 egg prices may be lower than in 1944, especially during the first quarter, the egg-feed ratio may be less favorable. This will probably result in a fewer number of chickens raised in 1945 than the 746 million head raised in 1944. But with a relatively strong demand for chicken meat expected, prices may not decline much from the high levels of 1944, when the average price received by farmers was about 24 cents, 124 percent of parity. Partly offsetting some of the decline in chicken production, however, will be an increase in broiler production due to easier feed supplies.

### Turkeys

Turkeys raised in 1944 were a record 35.7 million head, equivalent to about one-half billion pounds dressed weight. An increase in production in 1945 is probable because of high returns during 1943 and 1944 and generally abundant feed supplies. Even with lowered military takings, prices received by producers may not be much different in 1945 than in 1944. Civilian demand for turkey was not fully satisfied in 1943 and 1944, partly because of large military purchases. Turkey consumption prior to the war was on the upturn and this trend probably will continue.

GERSON LEVIN, BAE

## FEED

**T**HE feed supply outlook for the Nation's livestock has been materially improved by another season of generally bounteous feed crops combined with a downward adjustment in livestock numbers during 1944. The 1944 season was the eighth consecutive year

of generally favorable weather for crop production.

Total feed concentrate supplies for 1944-45 will be somewhat smaller in volume than in 1943-44, but will be the third largest on record. This supply, on a per animal-unit basis, will be considerably larger than in 1943-44, and slightly larger than the average supply for the five crop years, 1938-42, when reserves were accumulated.

### Feed Grains

With numbers of grain-consuming animals being reduced in 1944, the 1944-45 domestic supply of corn, oats, barley, and grain sorghums (which normally constitute about 80 percent of the total feed concentrate supplies each year) is indicated to be 13 to 15 percent larger per animal unit than in 1943-44. Feed requirements will be smaller in the 1944-45 feeding year than in 1943-44, because of fewer numbers of livestock on farms, but the rate of feeding per animal is expected to be high. Feed grain reserves are expected to be built up to some extent in 1944-45 from the 10.8 million tons reached at the end of 1943-44.

Deficit-producing areas will encounter less difficulty in obtaining feed supplies in 1944-45 than in 1943-44. Locally produced feed grain supplies for 1944-45 are about 9 percent smaller than a year earlier in the East North Central States and slightly smaller in the Western States, but about 2 percent larger in the West North Central, South Atlantic, and South Central States, and almost 11 percent larger in the North Atlantic region.

The quantity of wheat to be fed in 1944-45 will depend to a large extent on Government policies dealing with purchases and sales of wheat for feed. Present prospects are that little more than half as much wheat will be fed to livestock during 1944-45 as in 1943-44.

Feed-grain production this year is at near-record levels, but with the carry-over the smallest in 5 years, acreage planted for 1945 production probably will not change greatly from the relatively large 1944 acreage.

## FOOD GRAINS

Requirements of feed grains for food and industrial purposes may increase slightly in 1945, but the total quantity utilized for purposes other than feed and seed is small compared with total supplies. With reduced numbers of livestock on farms, demand for feed grains in 1944-45 is expected to decline, and prices are likely to average moderately lower in 1944-45 than in 1943-44. The decline in prices, however, will be limited by strong demand from the large numbers of livestock still on farms and by price supports for corn and wheat.

### Byproduct Feeds

Supplies of high protein and other byproduct feeds probably will be slightly larger in volume, and larger per animal unit in 1944-45 than a year earlier. Oilseed cake and meal supplies will be smaller in 1944-45 than in 1943-44, but a larger supply of wheat millfeeds is expected and production of other mill-byproduct feeds probably will be about the same in 1944-45 as a year earlier. Some decrease in demand is in prospect for byproduct feeds in 1944-45 because of reduced livestock numbers, and prices of some byproduct feeds may decline.

### Hay

Reductions in livestock numbers in 1944 will not materially reduce the number of hay-consuming animals on farms, because most of the reduction is in hogs and chickens. Consequently, 1944-45 hay requirements probably will be about the same as in 1943-44 under similar weather conditions. For the country as a whole the 1944-45 hay supply is about 3 percent smaller per hay- and forage-consuming animal unit than a year earlier. On a regional basis, the supply is indicated to be as large as or larger than last season in the West North Central and Western States, but smaller in other regions of the country. Hay prices may average somewhat higher in 1945 than in 1944, but will continue considerably under parity.

R. A. PHILLIPS, BAE

**T**HE 1945 wheat goal of 68.6 million acres is an increase of about 1.9 million acres above the acreage seeded for the 1944 crop, and 2.9 million acres above the 20-year (1924-43) acreage.

### Wheat

At average yields, which would be considerably below this year's 17 bushels per seeded acre, the 1945 wheat goal acreage would provide fully for estimated needs—including an adequate reserve to be carried over into the next crop year. Even if yields turned out somewhat below normal, as a result of adverse growing conditions, the goal acreage should still provide safe supplies. Continuation of the price-support loans of 90 percent of parity now in effect are provided by the Adjustment Act of 1938 and subsequent legislation on wheat harvested in the two calendar years following the proclamation that hostilities have ceased.

The war increased the use of United States wheat tremendously—from an average of 720 million bushels during 1932-41 to nearly 1,300 million bushels in 1943-44. This increase reflected vast quantities used for feed and industrial alcohol in addition to a moderate increase in food use. With 1943 production considerably below the large consumption in that year, carry-over stocks were reduced from 622 million bushels July 1, 1943, to 315 million bushels July 1, 1944, and large quantities were imported for feed. The large 1944 crop, however, is expected to cover a continued large consumption without further reducing the carry-over July 1, 1945.

World stocks of wheat in the present war have been very large in contrast to World War I supplies. Supplies in the four principal exporting countries on July 1, 1943, totaled 1,750 million bushels—an all time record high. On July 1, 1944, they were down to about 1,170 million bushels and on July 1, 1945, they are expected to be moderately lower. However, such stocks

would still be greatly above the 1935-39 average of 457 million bushels. Production in Argentina and Australia in 1944, especially in the latter country, where drought conditions have been severe, are expected to be substantially below average. This would partly offset the very large increase in production in both the United States and Canada.

### Rye

The 1945 acreage goals for rye for harvest as grain total 2.5 million acres for the country as a whole. An acreage of this size provides for maintenance of rye production in areas where rye produces more food or feed than alternative crops.

If average yields are assumed, 2.5 million acres would produce about 30 million bushels. While this would be above the 27.6 million bushels produced in 1944, total disappearance in 1945-46 is expected to be large enough to further reduce stocks by July 1, 1946. The very large stocks which existed July 1, 1943, have already been greatly reduced by a disappearance in 1943-44 larger than production, and undoubtedly will be reduced again in 1944-45 because of the small crop. It is expected that in 1945-46 there will be considerable demand for rye for alcohol or spirits, and some for export, but the quantities for use as feed will be below recent years and there may be some reduction in rye for food use. With a reduced stocks situation and good demand in prospect, prices in 1945-46 may be relatively high.

### Rice

The prospective demand for rice in 1945-46 is again large. Although the acreage goal has not been announced, it is expected that the acreage will be near the upper limit attainable on a sustained yield basis, which would involve some reduction in the large acreages of the past 2 years. The frequency of rice in the rotation has been increased to the point where further continuation of this practice would probably reduce yields and perhaps

reduce total rice production. Because of the high cost per acre involved in producing rice it is considered that yields be maintained at as high a level as practicable. With a somewhat smaller acreage in rice than during the past three years, it would be possible to make improvements in crop rotation practices and to remove from production some of the less profitable rice lands. The acreage in 1943 (1,294 thousand) was 47 percent above the 1935-39 average and that for 1944 (1,244 thousand) 41 percent above the average.

If average yields are assumed on an acreage slightly less than in 1944, production would be adequate to take care of estimated needs for food, seed, substantial exports and still leave a small carry-over at the end of the year. With the likelihood that American rice will continue in heavy export demand until Asiatic rice is again available in world markets, rice prices are expected to remain at high levels

R. E. Post, BAE

## FRUIT

**T**OTAL fruit requirements by civilians and noncivilians during the 1944-45 season are expected to be somewhat above the high levels of the preceding season, conditioned, of course, by the progress of the war. For the season ahead, there is a sharp increase in noncivilian requirements for processed fruits. Because of the smaller supplies of commercially canned and dried fruits available to civilians this season, a larger proportion of their total fruit consumption will be in the form of fresh fruits, canned fruit juices, and home-canned fruits.

### Production

The fruit industry of the United States is now operating at record high production and price levels. Production of citrus fruits, some deciduous fruits, and tree nuts has increased rapidly during the past decade, mainly because of new plantings,

increased bearing capacity of planted trees, and good care of orchards. Further increases in production, particularly of citrus fruits, are likely.

A record large production of fruit was achieved in 1944—approximately 16 million tons. The new 1944-45 citrus crop, despite hurricane damage in Florida, is now expected to be between last season's record output and the previous record crop in 1942-43. However, the prospective crop of early and midseason oranges, which provide most of the marketings from October through April, and the grapefruit crop are each about one-sixth smaller than the preceeding crops.

Aggregate production of the eight major deciduous fruits in 1944 is estimated to be about 20 percent larger than in 1943 and about 8 percent larger than the 10-year (1933-42) average. The 1945 crop of these eight fruits may be slightly smaller than the 1944 crop if average growing conditions prevail. From the above it may be seen that there is expected to be a continuing large supply of fruit during the 1944-45 season and perhaps also throughout the calendar year 1945. In addition, large supplies of tree nuts should be available from this year's well-above average crops.

### Prices

Prices received by farmers for fruit during the 1944-45 season are likely to average slightly lower than prices during the preceding season, which in general were more than twice the 5-year (1935-39) average. Prices for this year's large crop of deciduous fruits are averaging slightly lower than comparable prices last year, and for the apples, pears, and grapes remaining to be marketed probably will rise seasonally. Prices for new-crop oranges and grapefruit are likely to average slightly higher this fall and early winter, reflecting decreased supplies from Florida because of hurricane damage, but 1944-45 prices for the whole season may average no higher than last season.

The prospective large production of fruits and nuts in the early post-war years is expected to face a condition of greatly reduced Government requirements and smaller civilian demand. This will require a broadening of markets and uses. A resumption of exports of apples and pears should be possible. At the same time, increased imports of bananas and other fruits may be expected and thus provide more competition for the consumer's food dollar. Furthermore, materials and equipment should be available to can and freeze an increasing proportion of the fruit crops. If this can be done at a lower cost per unit of product, new market outlets as well as old ones should be reached throughout all seasons of the year. Nevertheless, production of fruit, particularly citrus fruit, is likely to outstrip demand for it at present price levels, leading to sharp downward adjustments in prices.

B. H. PUBOLS, BAE

## VEGETABLES

THE farm price peak for commercial truck crops for fresh market during World War II was reached in 1943 when demand was high and the volume of production was about the same as the 5-year (1935-39) average. In 1944, although demand continued at a high level, truck crop prices declined to an average about 10 percent below the 1943 high because of the record large crop. The 1944 production of fresh market truck crops was about one-fifth larger than the 5-year (1935-39) average. A record large volume of production was established in three of the four marketing seasons during 1944. An early end of the war in Europe will probably result in a considerably downward adjustment of truck crop prices in 1945.

The long-time trend of the per capita consumption of fresh vegetables has been upward. But if the European war is over this winter and if larger

supplies of processed vegetables become available for civilians, the demand for fresh market vegetables could be expected to be somewhat lower in 1945 than the record high of 250 pounds per capita consumption in 1942 and 1944.

### **Truck Crops for Process**

Production of commercial truck crops for processing in 1944 is nearly 60 percent larger than the 5-year (1935-39) average, a result of larger Government requirements of canned vegetables for war purposes. Between 30 and 40 percent of the 1944 total pack of canned vegetables will be required for noncivilian uses. If the war in Europe ends by next spring, it is probable that noncivilian requirements may represent no more than 25 to 30 percent of the total 1945 pack. Farm prices for truck crops, even though lower for some of them, will probably be well maintained in 1945 but may decline a little in 1946.

Some adjustments will be necessary in the post-war period as a result of the large expansion in the production of commercial truck crops for processing. An expected greater use of frozen vegetables and a possible increase in the rate of consumption of canned vegetables resulting perhaps from greater efficiency in processing and possible lower product prices may not necessitate a reduction in the acreage of commercial truck crops for processing to a level as low as the pre-war average.

### **Potatoes**

The 381-million-bushel crop of potatoes in 1944 is the second largest since 1934. Potato prices to growers during the winter months of 1945 may tend to approximate ceiling levels though dependent upon the rate of civilian consumption and the utilization of the 303 million bushel 1944 late crop. Assuming the present estimates of high noncivilian requirements, civilian per capita consumption for the 1944-45 season is expected to be about as low as any year on record.

Requirements for potatoes during 1945 are expected to be around 400 million bushels. An acreage in 1945 as large as that planted in 1944 would, with average yields, result in a crop of around 390 million to 400 million bushels. With lower consumer incomes such a crop could be expected to result in a lower price to growers than they will receive for this year's crop. According to present legislation, however, this price would be at least 90 percent of parity. If the general price level is lower during the marketing season of next year's crop the parity price would also be lower than that existing this year.

### **Sweetpotatoes**

Prices to growers for sweetpotatoes during the winter season of 1945 are expected to average lower than a year earlier. This year's crop is larger than last year's in some of the important shipping States, including Virginia, Maryland and New Jersey. The total 1944 crop of 73.5 million bushels is 9 percent larger than the 5-year (1935-39) average. In the post-war period prices for sweetpotatoes probably will average somewhat below present high levels, but no material reduction in acreage appears necessary.

### **Dry Beans**

The expected 1944 dry bean crop of 17.1 million 100-pound bags is 19 percent smaller than the 1943 crop, but 13 percent larger than the 10-year (1933-42) average. Prices for the 1944 crop probably will continue to reflect the support price level. It is expected that the Government requirements will represent nearly two-fifths of the total 1944 crop. While the 1945 demand for dry beans may continue at approximately the present level, a lower post-war demand can be expected necessitating some reduction in acreage.

### **Dry Field Peas**

The 8.9 million-bag (bags of 100 pounds) crop of dry field peas for 1944

is 18 percent smaller than the 1943 crop, but nearly three times larger than the 10-year average. The 1945 goal of 450,000 planted acres is 40 percent less than the 1944 acreage. The 1945 price support program for dry field peas would give growers \$4.50 per 100 pounds, U. S. No. 1 dry edible smooth peas of certain varietal types, f. o. b. car country shipping points. The comparable support price for the 1944 crop was \$5.65 per 100 pounds. In the post-war period demand probably can be met with an acreage much smaller than recent acreages.

J. W. CARNCROSS, BAE

## FATS AND OILS

**W**ORLD demand for fats and oils in 1945 and 1946 probably will continue strong in relation to available supplies. European demand for imported fats and oils and oilseeds will increase rapidly when facilities are expanded for shipping and distributing civilian goods to the liberated countries. The pre-war level of net imports of fats and oils into Europe, excluding the United Kingdom and Russia, was about 4½ billion pounds annually, of which approximately 2 billion pounds went to France, Belgium, Holland, and Italy. These levels may not be reached in 1945 or 1946, because of other demands on the supplies available outside the Japanese-controlled area.

No major relief in world supplies can be expected until the Far Eastern sources of coconut, palm, palm-kernel, and soybean oils are again open to the Western nations. The pre-war level of net exports of fats and oils from areas now controlled by Japan was about 3½ billion pounds annually.

### Prices

In view of the tight world supply situation, prices of fats and oils in the United States probably will remain at or near ceilings during 1945. Some

decline may occur in 1946, depending on the speed with which access is gained to far eastern surplus-producing areas. Wholesale prices of fats and oils in the United States were mostly at ceiling levels in 1944, the only major exception being reduced lard prices from May through June.

### Output

Total output of fats and oils from domestic materials in 1944-45 probably will decline to about 10 billion pounds from last season's record 11.2 billion-pound output. With the 1944 pig crop 25 to 30 percent smaller than a year earlier, production of lard and rendered pork fat may decline to about 2.5 billion pounds in 1944-45. Output of inedible tallow and greases may decline materially from the 1.95 billion pounds produced in 1943-44. Production of linseed oil also will be reduced, but probably not to the extent indicated by the 50 percent drop in production of flaxseed in 1944. The carry-over of flaxseed on July 1, 1944, was exceptionally large.

On the basis of October 1 crop indications, production of cottonseed, soybean, peanut, and corn oils may be slightly larger in 1944-45 than the 2.8 billion pounds produced a year earlier. Butter output, on the other hand, may be somewhat smaller than in 1943-44.

### Domestic Demand

Domestic demand for fats and oils in 1945 may slacken somewhat as a result of a moderate decline in consumer income and industrial activity. But demand probably will continue high enough to support disappearance at ceiling prices at or above 1944 consumption levels. The supply of fats and oils for domestic consumption probably will be smaller than in 1944, however, and export demand is likely to continue strong.

Stocks of fats and oils, which increased about 500 million pounds from October 1, 1943, to October 1, 1944, are expected to decline materially

during 1945. As prospects are not favorable for an increase in imports in 1944-45, the total supply of fats and oils in the United States may be about 700 million pounds less than a year earlier.

Prices of domestic oilcrops in 1945-46 will tend to reflect the trend in prices of fats and oils. The major factor that might bring a decline in prices would be the reopening of far eastern oilcrop producing areas to world trade. A decline in business activity also would have a downward influence on price. However, price supporting commitments under present legislation extend to soybeans, flaxseed, and peanuts at not less than 90 percent of the parity or "comparable" price for at least 2 years after the war.

E. L. BURTIS, BAE

## TOBACCO

**T**HE domestic tobacco outlook for 1945 and 1946 is favorable, in view of the high level of domestic consumption, particularly cigarettes, and the improved outlook for exports. Stocks of aged tobacco in Britain and liberated countries are low, needing several years of above average production to meet current demands and rebuild stocks to pre-war levels. Thus exports during the next year or so should be substantial, especially for flue-cured and dark tobaccos, but exports may decline over a longer period of time. Since about one-third of the domestic production is normally exported, prices in the early post-war period will depend to an important degree upon the export market.

Even though flue-cured tobacco stocks in this country are higher than in most pre-war years, they, as well as stocks of burley and some other types, are low in relation to current consumption. With the large 1944 crop, however, the supply is about the same as a year ago, and with consumption probably at its peak, little or no

further reduction in stocks is anticipated.

### Consumption

The over-all consumption of tobacco products is continuing at the highest level in history. Domestic consumption has declined in recent months, but this has been offset by shipments to the armed forces abroad. Consumption is expected to continue at a relatively high level for another year or so, but some decline may accompany decreased industrial employment.

The relatively high prices paid for tobacco this season and last, together with less dominant emphasis upon food and feed crops, may encourage farmers to increase tobacco production next year. Somewhat larger acreages of most types could be grown in 1945 and sold at profitable prices. Supplies of certain types, however, including dark air cured, burley and cigar wrappers, appear adequate in view of the outlook for requirements.

Although the immediate post-war outlook for tobacco is bright, growers should not lose sight of the fact that over a longer period of time (perhaps 3-5 years) the situation might not prove particularly favorable. In view of the upward trend in foreign production, exports will probably decline after foreign stocks are again built up to normal levels. Should industrial employment and consumer incomes decline appreciably in the early post-war period, United States stocks and supplies of tobacco could pile up quite rapidly with material price declines.

W. P. YOUNG, BAE

## COTTON

**T**HE domestic supply of American cotton in 1944-45 is now expected to be about 22.2 million running bales, of which about 10.6 million represent carry-over at the beginning of the season and 11.6 million new production. Although slightly larger than last season—most of the increase being the size of the crop—this supply is smaller



than that for any other season since 1936-37. During coming months exports will of course be limited and so the carry-over on August 1, 1945, will probably be slightly larger than a year earlier.

### Domestic Consumption

Monthly domestic consumption has continually declined since the peak annual rate of nearly 12 million bales was established in April 1942, with last season totaling slightly under 10 million bales. Despite some recovery in the fall months, consumption in 1944-45 may be somewhat smaller than last season.

Demand for cotton textiles is such that substantially larger quantities could be readily absorbed. This unfilled demand plus any increased demand which may arise for textiles for exports will go far, at least for a time, toward offsetting reduced military requirements following VE-Day. Consequently, cotton consumption seems unlikely to slump during the current season for lack of a sufficiently strong demand for cotton textiles at ceiling prices.

### Exports

American cotton will face even keener than normal competition in foreign markets, particularly as ocean shipping space becomes more plentiful. The August 1 world carry-over of foreign cotton totaled nearly 14½ million bales, compared with slightly more than 12½ million in 1943 and 7½ million in 1939. As most of this cotton is held in exporting countries, export outlets will be sought as soon as conditions permit. The recently enacted surplus disposal bill, which authorizes the sale of American cotton for export at world prices, improves American cotton's competitive position abroad, although the effect on United States exports after shipping becomes available will be lessened because import interests already have acquired title to considerable foreign cotton. The 1945 world carry-over is likely to be somewhat higher than the

25½ million bale carry-over in 1944, itself 1½ million bales larger than the carry-over a year earlier and over 4 million bales larger than in 1939.

Although Allied armies have already liberated areas where cotton textile production was important before the war, the amount of cotton these mills import will be limited by the mechanical condition of the mills, the adequacy of the supply of labor and power, the supply of capital available, the lag experienced in acquiring repair parts, raw cotton, etc., and the extent to which the extremely high level of synthetic fiber production is continued. Consequently, while exports of American cotton are expected to be larger this year than last, it seems unlikely that they will exceed 2 million bales.

### Prices

With cotton being purchased at parity prices by the War Food Administration, producers are assured a favorable return for their 1944 crop. The crop as estimated in October would, if the price averaged 21.08 cents per pound (the present parity price), have a value of 1¼ billion dollars. This is about 11 percent higher than in 1943 and the highest since 1928, assuming September prices to be the same as for the entire season. Gross return per acre from marketing both lint and seed this season of about \$72.58 is 173 percent above the 1909-14 average and 5 percent above the previous high reached in 1919. Because of cotton support prices and the prospect of little decline in parity, a favorable gross per-acre income situation may be expected to prevail next season unless yields fall greatly.

Although the outlook for the next year or two is for especially large gross farm returns from cotton, certain highly important unfavorable factors in the long-time outlook should not be overlooked. Domestic rayon consumption during the past 10 years has increased from a ratio of 1 pound of rayon for each 14 pounds of cotton in 1933 to 1 pound for each 8 pounds of cotton in 1943, and important gains

in rayon and other synthetic fibers are expected to continue during the next several years. At the same time, American cotton will meet increased competition in foreign countries both from synthetic fibers and from foreign cotton.

Foreign rayon production in 1942 was equivalent to roughly 6½ million bales of cotton compared with only 1 million bales in 1932. In 1943-44 the total supply of foreign cotton, of nearly 27½ million bales, was 8½ million bales larger than 10 years earlier compared with the peak foreign mill consumption of only 22¼ million bales in 1936-37.

H. G. PORTER, BAE

## WOOL AND MOHAIR

MILL consumption of wool in the United States in 1945 probably will be somewhat below the 1944 consumption of about 1 billion pounds (grease basis). Civilian demand and requirements for relief and rehabilitation are not likely to fully offset the decline in military orders after VE-Day. Consumption in the early post-war period, however, probably will be considerably larger than the pre-war annual consumption of close to 600 million pounds, and exceed domestic wool production by possibly 300 to 400 million pounds.

Offsetting the favorable demand outlook, however, is the fact that large stocks of wool have accumulated in the United States and in foreign producing countries during the war years. The carry-over of wool in the United States on April 1, 1944, excluding British-owned wool, totaled close to 750 million pounds, about 2½ times as large as the 1935-39 average. The 1944 carry-over in Southern Hemisphere producing countries was about equal to a full year's production in those countries. By the time the war ends the world carry-over of apparel wool may be possibly 3 times as large as the pre-war average despite

the small stocks in Axis-controlled areas.

Even with a reasonably rapid recovery in world consumption it will take considerable time before this wartime accumulation of world stocks can be used up in view of the probable quantities of wool and synthetic fibers to be produced. United States and British Government policies probably will be the dominant factor in the domestic and foreign wool price situation after the war as most of the carry-over will be owned by these Governments.

Prices of domestic wools are now being supported at a considerably higher level than prices of comparable foreign wools by the Government purchase and sale program. This is conducive to large imports as mills are purchasing domestic wools only where specified for Government orders. Under these conditions stocks of domestic wool are likely to accumulate at a rapid rate as military orders drop, unless some means can be found to restore a more normal relationship between prices of domestic and imported wools.

### Mohair

The domestic outlook for mohair for 1945 and the early postwar period appears favorable. Resumption of automobile production will stimulate demand for this fiber. Prior to the war, 65 percent of the mohair used in this country went into the manufacture of auto upholstery fabrics. The large stocks which accumulated with the conversion of the automobile industry to war purposes in 1942 have been absorbed by other civilian uses so that July 1, 1944 stocks of 8 billion pounds were only about one half as large as in 1942. Mohair prices have been at ceilings since midsummer 1943. As prices of mohair have not increased nearly as much as prices of most textile fibers during the war, they seem likely to continue at present levels, or higher.

F. M. HAMILTON, BAE

## SEED

**S**UPPLIES of legume and grass seeds, including winter-cover crop (but not lespedeza seed for which no production forecast has been made this year) total about 800 million pounds of clean seed, approximately the same as last year. Generally speaking, supplies of red clover, timothy, brome-grass, and crested wheatgrass are more than ample to meet expected 1945 requirements. On the other hand, supplies of alfalfa, alsike clover, sweet-clover, and white clover are relatively short.

Although supplies of redtop and bluegrass are below average, it is believed that they will be adequate for domestic requirements and still leave some for export. This somewhat anomalous situation arises from the fact that consumption of the major grass seeds in this country during the last 2 years fell about 12 percent below the 5-year (1937-41) average. (Consumption of alfalfa and the clovers fell off even more—21 percent.) The bulk of the orchard grass and meadow-fescue seed crops will be exported, as in the last 3 years.

Although 1944 production of alfalfa and clover seed (excluding crimson clover) as a group is 22 percent larger than last year, principally because of the large red clover crop, production of alfalfa, alsike clover, and sweet-clover is smaller than usual, with carry-over of these seeds below average. The increased production of Sudan grass, crested wheatgrass, and brome-grass more than offsets the smaller crops of timothy, redtop, and blue-grass. The 1944 production of winter-cover crop seeds is about a third less than 1943, mainly because the Austrian Winter pea crop is down two-thirds.

Even though prices to seed growers have been high and production has been stimulated by the Agricultural Conservation Program—which provides for seed-price supports as well as acreage and poundage payments for harvesting badly needed seeds—production of nearly half of the legume

and grass seeds this year is 20 percent or more below the goals. Because growers are receiving higher prices for many seeds this fall than last, farmers may again expect to pay relatively high prices for seeds in the spring of 1945.

With a large carry-over of many vegetable seeds and record crops in prospect this year, supplies of nearly all kinds of these seeds will be more than ample to meet estimated domestic and export requirements in 1945. Commercial vegetable-seed growers have increased their production at a faster rate than consumption has increased. It is expected that they will plant smaller acreages of several kinds of vegetable seeds in 1945.

G. C. EDLER, BAE

## SUGAR

**S**UGAR supplies in the United States are likely to remain relatively short so long as (1) the United States is unable to obtain sugar from the Philippines, (2) the sugar-beet crops in this country remain much smaller than in pre-war years, (3) Europe's need for imported sugar is abnormally large, (4) the demand for sugar in the United States remains at its present high level.

Total supplies available to the United States for use as food for the crop year beginning October 1, 1944, are not likely to be any larger than they were for the 1943-44 crop year.

The combined out-turn of continental cane and beet sugar from the 1944 harvests is likely to be only a little larger than last year's very short production. The 1944 acreage of sugar beets is slightly larger than the 1943 acreage. The Cuban crop to be ground in the early months of 1945 will be considerably smaller than the unusually large crop ground in 1944. However, the equivalent of 901,000 tons of raw sugar from Cuba's 1944 crop was used to produce invert molasses for manufacturing industrial

alcohol for use in synthetic rubber production. If all the necessary alcohol for the coming year can be obtained from other sources, the amount of Cuban sugar available for food uses in 1945 may be about the same as it was in 1944. Also, the 1944-45 cane crop in Puerto Rico may be somewhat larger than the unusually small 1943-44 crop.

Offsetting any increases in the size of crops to be harvested is the considerable reduction in the stocks of sugar in the United States which occurred during the 1943-44 season. Mainland sugar stocks on August 31, 1944, amounted to only 716,000 tons, raw value, as compared with 1,170,000 tons a year earlier. Further reduction in stocks is not feasible if sugar is to move through trade channels in anything like a normal manner.

Also, the European demand for sugar from the Caribbean Islands probably will be stronger in 1944-45 than it was in the previous year. Some of the recently liberated countries obtained part of their supplies from this area in pre-war years. Reduced sugar beet production in Europe in 1944 may make their need for Caribbean sugar even greater than usual.

During the first 9 months of 1944 civilian sugar consumption in the United States, plus military use and exports, has been maintained at a slightly higher level than in 1943 or the pre-war (1935-39) average. Total distribution by primary distributors from January through September 1944 amounted to 5,605,000 tons (raw value) compared with 5,244,000 tons during the first 9 months of 1943 and 5,257,000 tons for the pre-war (1935-39) average.

R. A. BALLINGER, BAE

## MARKETING

**R**ECONVERSION of processing and marketing facilities to a peacetime status may get well underway in 1945, with the prospect of a shift from shortages to surpluses of

some commodities. As war contracts are cut back it will be generally the function of private marketing agencies rather than the Government to make the necessary shifts to peacetime production.

In many cases, such as the meat packers who have been producing special meat products for the armed forces and will have to shift back to commodities for civilian use, reconversion will rest largely with industry. In others, where Government funds have been used in building plants, reconversion will be dealt with cooperatively by the Government and private agencies.

### Marketing Adjustments

Government commitments to support prices of important farm products for 2 years after the war is essentially a marketing job. In many cases direct market operations may be necessary, including purchasing, storing, transporting, and resale; in others indirect measures, such as loans and marketing agreements, will be appropriate.

Disposition of wartime regulations affecting the marketing of farm products will have to begin during 1945. The timing and character of such action will be important in relation to the problems of price support and expansion of civilian consumption. Some confusion is inevitable in making such adjustments, and in some instances new legislative authority may be required.

Adjustments of marketing equipment and personnel to a peacetime basis will encounter relatively less difficulty than in many other war industries. Similarity of most war foods to those used in peacetime made "retooling" unnecessary, and because of large capacity relatively few additions to plants had to be made. The transition period promises to be featured by adjustments to the technological progress in food processing and packaging which was greatly accelerated by the war. A virtual revolution in the marketing of perishable agricultural commodities in the several

decades following peace can be safely predicted.

### Dried Milk and Eggs

The problem of how to reconvert our dairy manufacturing enterprises to a peacetime basis may be acute before the end of 1945. With the production of dried whole milk and nonfat dry-milk solids now amounting to 800 million pounds compared to a pre-war figure of about 275 million, the possibility of a substantial reduction in noncivilian requirements points to the danger of possible large surpluses. With the quality of dried milk improved, an attempt might be made to increase consumption of dried whole milk, and thus the reconversion of some of the manufacturing capacity would be unnecessary.

With the bulk of the huge wartime increase in egg production going for military and lend-lease requirements, egg disposal may be one of the most acute marketing problems in 1945. Dried whole eggs have absorbed about 17 percent of the 1944 egg production, with stocks of dried eggs, both in this country and abroad, now very large. The repercussions on egg markets certain to accompany curtailment of dried egg production point to the need for exploring possibilities of increasing domestic consumption and export markets by taking advantage of the economies and relative ease of storing and shipping dried eggs.

The status of the fruit and vegetable processing industry will likewise be sharply affected by ending of the war in Europe. With a substantial decline in noncivilian demand, which now absorbs about one-half of the greatly increased wartime output, the problem of disposing of accumulated supplies and succeeding packs will become more difficult. Serious difficulties will face vegetable dehydration plants, which will be forced to operate on drastically reduced volume while hesitating to switch to canning because of the prospective over-all drop in demand for canned goods even though civilian demand increases. It has been

suggested frequently that the most favorable outlet for the products of some of these plants would be frozen vegetables. However, it should not be assumed that an unlimited immediate post-war market for frozen foods exists. Time will be required to build up the required storage, transportation, and new distributing equipment and services necessary for the tremendous expansion of the industry which seems assured during the post-war years.

### Marketing Margins

Slight increases over 1944 in marketing charges for farm products appear likely in 1945. This is anticipated because of the possible changes in various Government wartime controls, particularly those affecting prices, margins, wage rates, Government subsidy payments to marketing agencies and producers, and the compulsory simplification of marketing services such as the restriction on fluid milk deliveries.

The level of food marketing charges is closely associated with the levels of prices paid by consumers and received by farmers. Following the food price roll-back by OPA beginning June 1943, retail cost of farm food products have been held well below the high levels reached during the spring of 1943 when the maximum was \$484 for the market basket in May. The market basket represents average annual quantities purchased per family of three average consumers during the pre-war period 1935-39. For the first 8 months of 1944 total marketing charges averaged \$230. This total charge was made up of \$218 representing the spread between retail cost to consumers of \$455 and payments to farmers of \$237 plus \$12 of Government payments to food processors and other marketing agencies.

It is improbable that food prices would be permitted to exceed that level during 1945 unless there is an appreciable advance in wage rates. During the last 4 years average income per person in the United States has ad-

vanced much more rapidly than the level of retail food prices.

The farmer's share of the consumer's dollar spent for farm food products at 52 cents in 1943 was the highest on record even exceeding the World War I record high of 51 cents in 1918. A recent high point in the farmer's share was 54 cents in March 1944, declining to 51 cents in June and July. If Government payments to marketing agencies were shifted to farmers in terms of lower prices paid to them, the farmer's share would be reduced about 2 cents.

C. C. CURTISS AND R. O. BEEN, BAE

## TRANSPORTATION

**T**RANSPORTATION in 1945 probably will be tight and may even be critical. Problems of distribution, over-age cars and locomotives, and unloading handicaps due to manpower shortages will continue. While the end of the European phase of the war will ease the car supply situation, it will place more of an operating burden on transcontinental lines, particularly those in the west and mid-west.

### Railroads

The supply of boxcars, particularly the higher grade types, has been short for some time, with the supply during this past October peak 5,299 less than the 723,664 boxcars available a year earlier. This short supply was felt last month when the pressure of the heavy grain harvest in the Northwest and grain sorghums in the Southwest created a heavy demand for boxcars in those areas at the same time that the requirements for cars for the movement of war materials was running high.

Total demand for refrigerator cars is now greater than the supply, the 136,000 cars available this past October peak being 2,000 less than a year ago. Interstate Commerce Commission orders have limited the use of refrigerator cars for certain semiperish-

able freight. The War Food Administrator is strongly recommending that more new refrigerator cars, in addition to the 1,800 already scheduled, must be constructed in 1945 for replacements. It is estimated by the War Food Administration that refrigerator-car demands in 1945 may increase over 1944 by 2,500 cars per month.

The power situation is more favorable. Last October there were approximately 35,930 serviceable locomotives compared with 33,220 in October 1943 and qualitatively the locomotive situation should be some better than the increase in numbers would seem to indicate.

Although the 142,000 tank cars available this past October 1944 was about 200 more than a year earlier, the percentage of unserviceable cars has been increasing, with the result that the number of available cars in 1945 will be but a little above that of 1944. In addition, the tank-car supply situation will depend upon the ocean tanker supply during 1945.

The shift from coastwise and intercoastal shipping to the railroads early in the war is not expected to change in 1945.

### Trucking

Large numbers of trucks are wearing out and cannot be replaced immediately, with registrations declining from 4,876,054 in 1941 to a possible 4,250,000 in 1945. Of those now on the road, many are in such poor repair that long or regular trips are impracticable. Average load per truck has been stepped up, however, from 2.92 tons per truck in 1940 to 3.83 tons in 1943. Consequently usable trucks have accepted a considerable part of the increased volume of traffic. It is estimated, however, that the proportionate total volume has been showing a decrease since 1942.

The heavy-duty tire situation is the most serious problem in trucking, with synthetic rubber tires being less satisfactory for heavy-duty service than for use on lighter trucks. The shortage

of truck drivers and mechanics is unfavorable. The inability to obtain repair parts, except possibly heavy castings and forgings, does not generally seem to be as critical a problem as in recent months, but there will be delays in making replacements because of the shortage of mechanical service.

### Water Transport

Ratios of construction over sinkings have steadily increased, with the United States merchant fleet now rapidly approaching 4,000 vessels. The submarine menace appears largely over and our shipping has been supplemented by additions from Italian and other liberated fleets. Also, it is now possible to ship to the East by way of the Mediterranean and the Suez Canal. Turn-around time has been stepped up, and various space-saving practices have been adopted.

In spite of these favorable factors, there has been no surplus of ships nor is there a prospect of a surplus in the near future, according to the War Shipping Administration. The task of rehabilitating Europe, returning demobilized armies, and continuing the war in the Pacific will all place a heavy burden on ocean shipping even if the war in Europe should end soon.

More boats are now available for grain and ore shipments on the Great Lakes than was the situation in 1942 and 1943. Also, considerable new barge capacity was constructed during 1943 and 1944.

### Livestock Transportation

The reduced hog supply will ease the demand for motortrucks in the Corn Belt States in the fall and winter of 1944-45. In general, the reduced number of motortrucks is expected to be adequate for both transporting hogs in the Corn Belt and for hauling cattle and lambs to railroad loading points in the range States. The improved efficiency in assembling livestock from farms, the loading of trucks more nearly to capacity, and hauling more loads per week, and other

changes brought about in the past 2 years, are expected to continue. The shortage of tires for heavy-duty trucks should not affect livestock hauling as much as the hauling of some other products. Ninety percent of the trucks that hauled livestock to market in the Corn Belt in 1942 and 1943 were of 1½-ton size and smaller.

H. L. COOK and K. BJORKA, BAE

## FARM LABOR

**A** SOMEWHAT larger supply of farm labor than in 1944 is in prospect for 1945. Some increase in both numbers and quality of farm workers, together with an improved farm machinery supply situation, should enable farmers in many areas to meet 1945 labor requirements with less difficulty than during the past two years.

### Labor-Intensive Areas

Some labor-intensive or highly seasonal crop areas, such as specialized grain, sugar, potato, vegetable and fruit areas, however, will continue to experience seasonal farm labor supply problems that can only be met by intensive local recruitment and the utilization of workers from outside the areas. This will be true especially in the Pacific and Intermountain States that require such large numbers of seasonal workers, and where employment in war industries and related activities is expected to remain at a high level with intensification of the war in the Pacific.

Several factors point to some improvement in the farm labor supply situation. Extensive production cutbacks in war industry following termination of the European war undoubtedly will release several million war industry workers. Although a major portion of these released workers may be absorbed in civilian industry through reconversion of war plants to civilian production together with the retirement of many women and older workers from the labor force, the sup-

ply of potential farm workers will probably increase.

The farm labor supply will be increased especially in those areas where war plants are located in former predominantly rural areas because much of the working force of these plants has been drawn from nearby farms and small towns, and should therefore become immediately available for farm work when war industry employment declines. Labor supply problems also may be eased somewhat for intensive fruit and vegetable sections in close proximity to industrial centers where unemployment incident to reconversion might assume significant proportions.

### Farm Wages

Farm operators may be in a somewhat better position to compete with industrial employers for workers next year. Farm wage rates are expected to continue near their present high levels in view of a continued high demand for farm labor but farm income is expected to continue at a relatively high level. In addition, a reduction in the length of the industrial work week toward the 40-hour-per-week level would eliminate much overtime pay, with average weekly earnings of industrial workers reduced unless basic wage rates were increased. Thus the spread between farm hired worker earnings and industrial worker earnings may be reduced and the competitive position of farm employers improved. Also, the redistribution of industrial employment, resulting in relatively more workers in "normal civilian" industry, would have the effect of reducing the overall average weekly earnings of industrial workers because war industry wage rates have been much higher.

Partial demobilization of the armed forces may add to the supply of farm labor, although probably not to the extent that cut-backs in war industry production are likely to add to it. The effect that partial demobilization will have on farm labor supply will depend upon the initial date and

rapidity of demobilization and the extent to which returning members of the armed forces make themselves available for farm work. Returning farm boys will add some experienced workers to the farm labor force. However, many released servicemen may wish to take advantage of provisions of the "GI Bill of Rights" and continue their education which was interrupted by war; others may be attracted to non-farm employment or may return to industrial jobs in which they have re-employment rights.

Prisoners of war might be an important source of farm labor for next year, but are uncertain depending upon the date of termination of European hostilities. Foreign workers are expected to be imported in 1945 in such numbers as are needed to assist in areas of critical seasonal labor needs. Programs for recruitment of farm workers in areas of surplus for placement in areas of need are expected to continue.

### Emergency Workers

Other emergency farm workers, such as the Women's Land Army and the Victory Farm Volunteers, are expected to be more difficult to recruit after the end of the war in Europe. Special and intensive efforts will need to be made to recruit and route to areas of need workers who become available as a result of war industry cutbacks and partial demobilization of the armed forces. Not only will this be necessary to meet farm labor requirements, but it will contribute to the aim of full employment for all members of the labor force able and willing to work.

Although transportation difficulties will continue as an obstacle, some increase in the number of migratory farm workers is expected.

Considering all factors involved, the level of farm employment is expected to be slightly higher in 1945 than in 1944. In addition, an improvement in the average quality of farm workers is likely since some of the women, children, and older workers may be



replaced by experienced and more physically able workers. Moreover, most of the workers who will likely be employed in agriculture next year will have had at least one to two years, experience in farm work. But problems will arise in many local areas during periods of peak seasonal labor demand.

G. T. BARTON, BAE

## FARM MACHINERY

**I**N GENERAL farmers will have more tractors and tractor equipment available for farm work next year than in any previous year. The period, January 1, 1942, to January 1, 1945, will probably see about a 12 percent increase in numbers of tractors, and tractor tillage and planting machines on farms, while there may be increases ranging from 25 to more than 50 percent for many other machines on farms such as combines, corn pickers, tractor cultivators, and windrow pick-up balers.

Because numbers of farm work animals on January 1, 1945 probably will be about 5 percent less than the number on that date in 1942, even greater percentage decreases are expected for most horse-drawn machines.

The restricted farm machinery production programs of the past three years has resulted in more conservation and less discarding of used equipment than would have been the case had production been less restricted. Hence the number of machines on farms next January 1 will include an appreciable number that normally would have been discarded. For example, it is expected that about 150,000 tractors, or about 7 percent of the number on farms, normally discarded, will be used next year, as will a proportionate number of other machines.

### New Machinery Supplies

Supplies of new farm machinery in 1945 should be in better balance in relation to needs than in any year since 1942 even though more machines probably could be sold next year than

are now expected to be available. Many farmers with the resources for replacing obsolete and badly worn equipment may not be able to obtain all the machines they need in the coming season.

Production of new machinery and parts, for the year ending June 30, 1945, is expected to about equal the large output of 1940. And if the European phase of the war should end in the next few months, farm machinery production in the second half of next year would be more than the first half. Thus production during the calendar year 1945 may be higher than any other year except 1941, the previous record production year.

### Tractor Production

Farm tractor production, including garden tractors, during the year ending June 30, 1945 probably will amount to about 175,000 units, with prospects for even more production during the calendar year 1945. Production of machines for preparing land, planting and seeding, cultivating, and spraying and dusting will be substantially larger in 1945 than in any year since 1941. Harvesting machines in 1945 again will constitute a larger part of the total machinery production than in pre-war years.

Rationing of farm machines, except corn pickers and crawler tractors, was terminated in September 1944. Because of large military requirements for crawler tractors, the supply for farm use will continue to be extremely limited.

Farm transportation is likely to be the outstanding farm machinery problem in 1945. Motor truck and automobile replacements have been extremely small since 1941, and to keep motor vehicles in use next year, much more than average supply of repair parts, tires and services will be needed. The trickle of surplus army trucks available to farmers in 1945 is not expected to materially improve the motor transport situation on farms.

A sufficient supply of tires for tractors and other farm machines is

expected to be available in 1945, but the supply for automobiles and trucks will be adequate only for most essential requirements, with large size truck tires continuing to be scarce. Although an adequate supply of motor fuels and lubricants is in prospect for next year, the situation is not expected to be much better than this year.

New tractor prices in 1944 were about 12 percent higher than in 1941 and new tire prices about 40 percent higher. Average prices paid by farmers for gasoline were about 5 percent higher than in 1941, while prices paid for new farm machinery, other than tractors, trucks and automobiles, averaged about 12 percent higher. Because of carrying-charge compensation allowed dealers, 1944 prices paid by farmers for 1942 models of new trucks and automobiles were about 35 percent above 1941 prices. Ceilings for most used trucks and automobiles were not established until mid-1944, and so prices paid for these items by farmers last year increased more than

for new motor vehicles. Likewise, prices for used tractors and field machines advanced more than prices for new machines.

However, with prices for new farm machinery being subject to ceilings since 1942, most prices have advanced very little during 1944. And with the 1945 prospect of more new machines, other than motor vehicles, it seems probable that price advances may not be pronounced next year. On the other hand, some reductions in quality, such as in the case of truck tires and gasoline of lower octane rating, have taken place in the last year or so. These lower grade items will probably have to continue to be used in 1945.

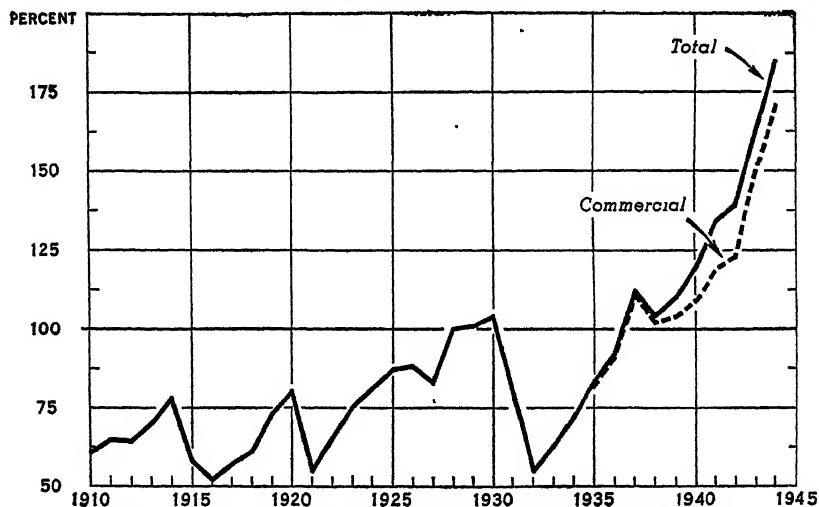
A. P. BRODELL AND  
M. R. COOPER, BAE

## FERTILIZER

**F**ERTILIZER supplies are expected to be ample for the 1945-46 season to meet all commercial demands plus any probable distribution associated with

### FERTILIZER CONSUMPTION IN TERMS OF NITROGEN, PHOSPHORIC ACID, AND POTASH, CONTINENTAL UNITED STATES, 1910-44 \*

INDEX NUMBERS (1935-39=100)



\* COMPUTED FROM FERTILIZER CONSUMPTION AND ANALYSIS DATA BY MEHRING AND SHAW, D. P. I. S. A. E.  
AND FROM PHOSPHATE DISTRIBUTION DATA BY AGRI. ADJ. AGENCY  
DATA FOR 1944 ARE PRELIMINARY

Government conservation programs. Plant capacity is now ample, and it appears that lessened military demands will permit use of materials for fertilizers in sufficient quantity to meet any desired increases on crops and in areas where fertilizer use was formerly small.

Wartime annual commercial consumption of fertilizer in the continental United States, in terms of nitrogen, phosphoric acid and potash, for the period 1940-44 has averaged about 37 percent higher than in 1935-39. Commercial consumption during 1944 will be about 75 percent higher than the average for the pre-war period and about 14 percent more than in 1943. This is in contrast to World War I when average consumption during 1915-19 was about 11 percent below that for the 1910-14 period, because of the lack of synthetic nitrogen plant capacity and cessation of potash imports.

Increase in the use of fertilizer would no doubt have been greater during the present war period if it were not for necessary diversion of materials and facilities to meet direct military needs. If farm prices continue at present levels, consumption of fertilizer probably will continue to increase, but perhaps at a lower rate than during the past five years.

### Prices

The index (1935-39=100) of prices per unit (20 pounds) of nitrogen, phosphoric acid and potash is now 124, while shortly after the close of World War I it reached 271. This reflects to a large extent the effect of current price ceilings, but another factor, the higher analysis of present day fertilizers, also operates in favor of lower retail prices because of savings in transportation and bagging costs. The trend toward higher analysis fertilizers will no doubt continue.

The outlook for fertilizer prices during the transition period from war to peace depends largely on whether inflationary controls, including those applying to costs and retail prices of ferti-

lizer, are retained. The longer time outlook for both consumption and prices will depend partly on the general demand for farm products, particularly for those crops that are heavy users of fertilizer and partly on general policies affecting fertilizer production, costs and prices. If these factors are favorable, there are possibilities for very large future increases in the volume of fertilizer consumption at prices favorable both to farmers and the fertilizer industry.

D. B. IBACH, BAE

## INSECTICIDES

THE insecticide and fungicide supply for the 1945 crop year, except for certain items, is expected to be as good as or better than in the previous 2 years. Items expected to be available in adequate quantities to meet agricultural requirements are (1) arsenicals, such as lead arsenate, calcium arsenate, and paris green; (2) fluorine compounds such as cryolite, sodium fluoride, and sodium fluosilicate; (3) petroleum oils for sprays; and (4) fumigating materials such as the cyanides, methyl bromide, carbon disulfide, and chloropicrin. Very little pyrethrum will be available for agricultural use in 1945 because of its need in controlling malaria mosquitoes in the fighting zones. Nicotine will probably be inadequate to meet all requirements. Rotenone imports may be greater than in 1944, but because stocks are lower the supply available to farmers will be no greater.

New materials which can serve as partial replacements for pyrethrum, rotenone, and nicotine will not be available in quantities sufficient to meet the essential demands. DDT (dichloro-diphenyl-trichloroethane), which has shown promise for many uses, requires further experimental and developmental work before it can be made available for general use. Powdered sabadilla seeds are showing some promise in relieving shortages of pyrethrum and rotenone.

Fungicides such as sulfur, copper compounds (except for certain copper oxides), mercury, and new synthetic organic fungicides for controlling plant diseases are expected to be available in sufficient quantities to meet the requirements for crop protection.

Dust diluents for insecticides and fungicides, such as lime, talcs, and clays, are in adequate supply.

Animal medicinals, such as phenothiazine, diphenylamine for the production of "Smear 62" in controlling screwworm maggots, and other chemicals are expected to be available in adequate quantities for 1945 requirements.

C. C. HAMILTON, OMF

## LUMBER

**D**OMESTIC lumber production in 1945 is expected to be slightly under the 1944 level of about 33.8 billion board feet, assuming the industry is able to hold its own as it did in 1944. Imports are also expected to continue near the 1944 level so that next year's new supply would be around 33.3 billion board feet compared with about 34.8 billion for this year.

The two major domestic uses for lumber are residential and farm construction. Residential construction in 1944 is being held to about 1.6 billion board feet, but anticipated relaxation in restrictions should increase lumber for this purpose to about 2.6 billion board feet in 1945. Similarly, lumber for farm use could be expected to increase from 3.5 billion board feet in 1944 to about 4.5 billion in 1945. Normal farm use of lumber is around 6 to 6.5 billion board feet a year.

A reasonably early end of the war in Europe would make possible a net addition of about 3 billion board feet for civilian use in 1945, as the savings in the tremendous quantities used in direct military construction and for shipping supplies to the armed forces in Europe would be more than the

amount needed for rehabilitation of devastated areas there.

While the over-all supply situation for 1945 appears to be better than in 1944, stocks of finished lumber are the lowest they have ever been so that it is almost impossible to get dry lumber for construction. As farmers well know, the kinds and quality of current lumber stocks are below pre-war standards, with prices in some areas high for the quality offered. Because there is little chance to accumulate dry stocks during the first quarter of 1945, the prospects for improvement in quality probably will not come until later in the year.

### Farm Use

Easing of manpower shortages with a one-front war should facilitate both lumber production and farm construction. Because certifications under WPB order L-335 are now running below the allotments for farm use, it may mean an easing of the supply situation in relation to demand, or it may mean a refusal to buy the quality offered, a shortage of labor for farm construction, too much paper work, or that lumber is being obtained without certification. Even so, with anticipated relaxation of restrictions there will probably be more use of lumber on farms in the coming year.

An important share of the country's total lumber production comes from farm woodlands and production from these sources has helped materially in meeting wartime needs. Continued high output of farm timber will be necessary—on a selective cutting basis to maintain future woodland productivity—if total 1945 production is to meet the expected demand.

F. J. HALLAUER, FOREST SERVICE

## FARM EQUIPMENT

**S**UPPLIES of barbed and woven wire fence, poultry netting, bales, ties and staples are expected to be entirely adequate for essential farm

needs in 1945. Quantities available should be equal to, or greater than, the fairly large volume of 1944, and much in excess of the smaller supplies of 1942. The supply of most building materials for farm use, except good quality lumber, is generally adequate. The present shortage of metal roofing will probably be alleviated somewhat at the termination of the European phase of the war when military cut-backs are expected to make more sheet steel available to civilians.

In most areas, the supply of concrete and cinder blocks, tile, and bricks is fairly good. Increasing amounts of lumber substitutes are being made available as the demand for military and industrial construction is lessened. There is an abundance of reinforcing steel for use in concrete construction.

### Copper Wire

Copper wire for farmstead wiring can now be readily purchased in almost every section of the country. The shortage of transformers, due to the demand by the armed forces for radio and radar type transformers, is the controlling factor in limiting the number of electrical utility connections which can be made at the present time. This condition should improve

somewhat with the close of the European war but the supply of transformers may not be entirely adequate until termination of military activities in the Pacific Theatre.

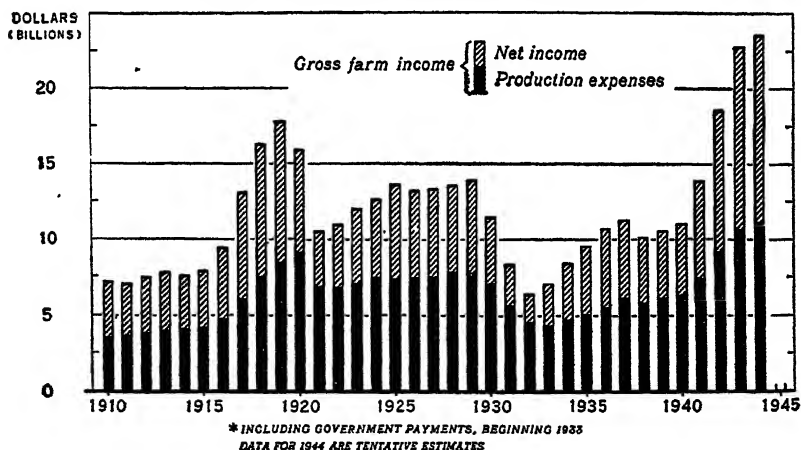
### Electric Motors

Electric motors should be available in 1945 in quantities equal to the 1944 supply. However, single phase motors, such as are used with hay driers, are likely to fall short of meeting demands, but their lack should not be a significant hindrance to meeting 1945 food production goals.

Restrictions on new construction continue to be rather tight, but it is anticipated that there will be few regulatory limitations affecting farm construction after the close of the European war. However, temporary shortage of suitable lumber, the relatively low production of civilian plumbing and heating equipment, manpower shortages and high wage costs may retard new farm construction.

The supply of farm and garden hand tools, mechanics hand tools and chain are expected to be sufficient to meet 1945 agricultural needs. The production of home pressure canners in 1945 of about 600,000 units will ex-

**GROSS FARM INCOME: NET INCOME AND PRODUCTION EXPENSES  
OF FARM OPERATORS, UNITED STATES, 1910-44\***



ceed the relatively high production of 1944 by about 50 percent. Paint supplies in 1945 will probably be adequate to meet farmer demand. Supplies of screen wire are likely to be somewhat below requirements, as was the case in 1944. Approximately 14½ million pounds of miscellaneous farm rope was produced last year, with a comparable amount expected in 1945, a quantity in excess of the pre-war annual average production.

A sufficient supply of dairy and poultry equipment is in prospect for 1945. Quotas for milking machines have been large, with the number on farms showing a 50 percent increase for the 3-year period ending next January 1.

W. D. McAFEE, OMF

## LAND VALUES

**I**N SPITE of strong counterbalancing forces stimulating a rise in land values on the one hand and those curbing further upward movement on the other, the inflationary forces are likely to be dominant for at least another year. Accordingly, rather widespread increases may be expected during the coming year, averaging between 10 and 15 percent for the country as a whole, which will be somewhat below the increase last year but greater than two years ago.

Forces stimulating a rise in land values include (1) continuing high farm incomes, (2) possible growing volume of purchasing power by prospective buyers, (3) abundant credit along with expanded borrowing capacity because of increased equities, (4) low interest rates, (5) high current earning capacity of farm land, and (6) limited alternative investment opportunities though probably not as tight as in recent years. All these factors make land purchases attractive to farmers as well as others. In addition to these forces, the demand for land will become stronger with the large-scale return of servicemen and

war workers to rural areas, with the reduction of farm production difficulties, and with less incentive for maintaining savings in war bonds and other noninflationary types of investments.

Forces curbing more rapid land value increases will be cautious attitudes based on recollections of the last land boom and a generally guarded land-value outlook. Both buyers and lenders appear skeptical of a continued high wartime level of farm product and land prices, and appear acutely aware of possible serious farm surplus problems shortly after the cessation of hostilities. Conservative attitudes may increase in strength unless undermined by general inflationary tendencies, because prevailing land values are considered above normal levels in most areas and because the remaining high war-income years are believed to be limited.

The conservative attitudes will probably be strong enough to temper the rate of increase in the coming year and prevent a runaway boom. Even a rise of 10 to 15 percent would bring land values in most areas above levels likely to be maintained in the longer post-war period unless the general price level is definitely higher than it is now.

M. M. REGAN, BAE

## CREDIT

**W**ITH farm-mortgage debt the lowest it has been in nearly a quarter of a century, forecast at about 5½ billion dollars on January 1, 1945, and with net farm income for 1944 the largest in history, now believed to exceed 12 billion dollars, farmers in general will begin 1945 in a better financial condition than they have been for a generation or more.

Whether this improved financial condition continues throughout 1945 will, of course, depend largely on future price and income levels and on future policies of farmers in their use of cred-

it and disposition of cash and other liquid assets.

Although the farm-mortgage debt has been reduced by about a billion dollars thus far during the war, the rate of reduction has been declining in recent months and this trend is likely to continue in 1945. Mounting incomes during the past 4 years together with rising land values in an active farm real estate market have stimulated further farm-mortgage indebtedness by many farmers, while the increased incomes together with restricted opportunities to buy durable goods for capital improvements have encouraged debt repayments by others.

In the coming year a larger proportion of farm income is likely to be diverted to the purchases of durable goods and less to debt repayment and savings, to the extent that farm machinery, building materials, equipment and labor become available in larger quantities. Thus the volume of both real estate and non-real-estate loans may show some increase, the latter having been rather stable during the war period as the reduced number of loans has been counterbalanced by larger loans on the average.

Loanable funds will be in abundant supply and no major change in the interest rate trend seems likely in the immediate future. But the average interest rate on farm mortgages, which has decreased from 6 percent in 1933 to 4.5 percent in 1944, may show a slight rise as an increasing number of new mortgages are financed by noninstitutional lenders at rates generally above the average.

While farm incomes remain at present high levels the large debt of many individual farmers is no great cause for concern. But a break in prices may make it difficult for many of them to continue repayments.

Bank deposits by farmers increased nearly 30 percent during the year ended September 30, 1944, and war bond holdings have increased substantially. Farmer savings in this form are likely to further increase during the coming year unless commodity prices decline or unless a large volume of durable goods and other scarce materials become available and thus stimulate their purchase by farmers.

N. J. WALL, BAE

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1934	75	76	109	122	129	95	101	89	70	84
1935	87	86	117	125	130	103	114	116	116	115
1936	103	100	118	124	127	111	125	114	118	120
1937	113	117	128	131	133	126	130	110	132	127
1938	89	91	115	123	126	125	114	108	115	113
1939	109	105	113	121	124	123	110	95	112	108
1940	125	119	115	122	125	126	119	96	111	112
1941	162	169	127	131	132	154	139	121	146	140
1942	199	238	144	152	150	201	162	151	188	173
1943	239	305	151	167	162	264	198	190	209	200
October	247	317	150	170	165	279	198	212	204	204
November	247	318	150	171	166	-----	202	219	193	201
December	241	316	151	173	167	-----	203	212	194	200
1944-January	243	319	151	174	168	275	201	177	194	193
February	244	321	151	175	169	-----	201	168	199	194
March	241	318	152	175	169	-----	199	162	203	194
April	239	313	152	175	169	292	196	151	203	191
May	237	318	152	175	169	-----	194	153	201	190
June	235	313	152	176	170	-----	192	154	200	189
July	231	306	152	176	170	328	194	165	197	190
August	232	310	152	176	170	-----	196	171	201	194
September	231	-----	152	176	170	-----	198	179	200	196
October	-----	-----	-----	176	170	325	201	190	201	199

Index of prices received by farmers (August 1909-July 1914=100)										Parity ratio <sup>4</sup>
Year and month	Crops								All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934.....	91	95	159	97	95	88	95	98	90	70
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	108	102	165	95	112	92	104	107	114	90
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	176	67	88	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	96	73	111	88	100	80
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	180	190	179	245	183	192	119
October.....	157	158	335	164	201	195	187	183	194	118
November.....	160	158	347	156	202	196	228	187	194	117
December.....	166	165	349	180	202	208	223	192	196	117
1944-January.....	170	168	350	182	203	204	267	199	196	117
February.....	170	169	348	181	205	206	247	196	195	115
March.....	169	171	351	181	207	215	242	198	196	116
April.....	171	172	352	183	207	237	220	200	196	116
May.....	170	173	350	180	208	232	225	198	194	115
June.....	165	170	350	183	210	228	231	197	193	114
July.....	161	168	350	184	209	230	195	194	192	114
August.....	156	166	355	182	209	214	186	191	188	113
September.....	155	162	358	170	207	206	166	188	182	112
October.....	164	161	357	171	211	205	153	187	194	114

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.



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DEPARTMENT OF AGRICULTURE  
BUREAU OF AGRICULTURAL ECONOMICS  
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# THE AGRICULTURAL • SITUATION •

DECEMBER 1944

*A Brief Summary of Economic Conditions*

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**A** WARTIME Christmas for the fourth successive year again finds American farmers with another year of record agricultural production—this year total production was the highest in history, 33 percent above the average for the five pre-war years, 1935-39. For this achievement by the Nation's farmers, America and her allies are thankful. \* \* \* But, unfortunately, an early European victory is not in sight, with total food requirements next year continuing at a very high level. This means American farmers in 1945 will have to add another year of top production to their laurels. \* \* \* During the first few months of 1945 the armed forces will face a shortage of 110 million pounds of chicken meat and so to alleviate the shortage, 100 percent of all live chickens marketed in major producing counties of Delaware, Maryland, Virginia, and West Virginia—the region where about half of the country's broilers are produced—must be set aside till military requirements are met. \* \* \* Farm land values continued upward during the second and third quarters of 1944, but the volume of voluntary transfers was 10 percent below the same period in 1943. \* \* \* Preliminary estimates place 1944 cash receipts from marketings of agricultural products somewhere around 20 billion dollars, nearly a billion dollars more than the 1943 record.

# Commodity Reviews

## TOBACCO

OVER-ALL consumption of cigarettes is continuing at the highest level in the history of the country. Although civilian consumption is running below last year, shipments to the armed forces abroad have increased sharply.

Total production in 1944 will probably reach 329 billion cigarettes, an increase of 20 billion over 1943. Of this number at least 110 billion (including Red Cross purchases and gift packages) will go to the armed forces abroad, the equivalent of about one-third of the total 1944 output. The supply available for civilian and military personnel in this country will be about 220 billion in 1944, compared with 258 billion in 1943.

Aside from the huge military requirements, other factors responsible for the current lack of sufficient supplies of cigarettes include shortages of factory labor and shipping containers and buying in advance of needs by consumers.

In the midst of the marketing season for one of the largest crops on record, demand for tobacco continues strong and prices relatively high. The 1944 crop of 1,809 million pounds is second only to the 1,880-million-pound crop grown in 1939. Production of all types shows an increase over 1943, but most of the increase is in flue-cured and burley, the major cigarette types.

Reflecting the high level of cigarette consumption, demand for most all grades of flue-cured remains strong and prices high, as the 1944 marketing season nears its end. With most of the crop already sold, it appears that the 1944 season average price of flue-cured will be about 42 cents per pound, compared with 40.2 cents for the 1943 crop and the all-time high of 44.4 cents in 1919.

Burley markets are scheduled to

open December 11, and in view of the strong demand for flue-cured and the high level of consumption of cigarettes, burley prices should be high again this season.

Although stocks of flue-cured tobacco are above most pre-war years, they, as well as stocks of other cigarette types, are lower than normal in relation to demand. With the large 1944 crop, the supply of cigarette tobacco for the 1944-45 season is above last year. Production in 1944 was greater than the 1943-44 season disappearance, with cigarette manufacturers allocated more tobacco from this year's crop than they used last season. With consumption probably near the peak for the war period, and after allowing for exports of about 400 million pounds, no further reduction in stocks is anticipated.

## FEED GRAINS

THE 1944 corn and grain sorghum crops are the largest on record. Production of all corn—for grain, silage, hogging off, grazing, and forage—was estimated on November 1 at 3,258 million bushels, 4 percent larger than the previous record crop in 1942. Corn harvested as grain may total 2,900 million bushels this year, 2 percent more than in 1942.

Sorghum grain production, estimated at 160 million bushels on November 1, would be 50 percent larger than the previous record crop in 1942. Production of oats this year, indicated at 1,192 million bushels on November 1, would be 4 percent larger than 1943 but 12 percent smaller than 1942. Barley production this year, indicated at 267 million bushels, is the smallest since 1939.

Production of all wheat in 1944 is also at a record level, now estimated at 1,109 million bushels, 33 percent larger

than 1943 and 46 percent larger than the 10-year (1933-42) average.

Total supply of feed grains for 1944-45 (including estimated imports), plus the quantities of wheat and rye estimated to be fed in 1944-45, is somewhat less than the corresponding supply in either of the 2 previous years. On a per animal-unit basis, however, the supply per animal for 1944-45 may be materially larger than in the 1943-44 feeding year, but about the same as in 1942-43.

## LIVESTOCK

**A** WIDER margin between prices for feeder and fat cattle than a year ago, together with larger feed grain supplies per animal unit, may result in the feeding of more cattle this winter than a year earlier.

Prices for fed cattle were at the highest levels of the war during the late summer and fall of 1944. Prices for such cattle may decline moderately as marketings increase in 1945, but these prices should be well maintained for at least the first half of the year.

Purchases of beef by the armed forces during the first half of 1945 may be larger than in the same period a year earlier. If marketings of fed cattle during the first half of 1945 are no larger than the large marketings in the same period of 1944, civilian supplies of such beef will fall far short of potential demand at ceiling prices.

The number of lambs to be fed this winter will be less than the number fed a year earlier and probably will be the smallest in at least 10 years. Feeding this year is expected to be smaller than last winter in the Corn Belt and in the main feeding areas of the West. But there will be a large increase in lamb finishing in the wheat fields of the Southern Great Plains.

A material reduction in pork output during the first 6 months of 1945 compared with the same period of 1944, together with large military and lend-

lease purchases, will result in much smaller civilian pork supplies than a year earlier.

Hog prices in the first half of 1945 probably will average higher than a year earlier, when they were near the support level. Ceiling prices for hogs weighing 240-270 pounds were increased from \$14 to \$14.75, Chicago basis, on October 30, primarily to encourage the feeding of hogs to heavier market weights.

As a further incentive for increased pork production, the support price weight range was extended to cover all Good and Choice butcher hogs weighing from 200 to 270 pounds on November 16. The previously announced support weight was 200 to 240 pounds. The present announced support price is \$12.50, Chicago basis, and extends through June 30, 1945.

## DAIRY PRODUCTS

**P**RICES received by dairy farmers will decline less than seasonally from December 1944 through March 1945 and probably will average about the same as a year earlier. However, because of higher dairy production payments during the next few months, returns to dairy farmers will be at the highest level ever reported for that period. This will result in a milk-feed price ratio more favorable than other important livestock-feed price ratios.

Milk production in 1945 may reach 119 billion pounds if returns to dairy farmers, including dairy production payments, remain at about the same level as in 1944. Most of this increase is expected to come in the North Atlantic and East North Central regions because of increased cow numbers and more favorable feed supplies than in 1944. Because whole milk marketings are the general rule in these areas most of the increased production probably will be utilized in the manufacture of whole milk products, such as evapo-

**Index Numbers of Prices Received and  
Paid by Farmers**  
[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	156	116
February.....	184	153	116
March.....	192	159	121
April.....	197	160	123
May.....	194	162	120
June.....	195	163	120
July.....	193	164	118
August.....	192	164	117
September.....	193	164	118
October.....	194	165	118
November.....	194	166	117
December.....	196	167	117
<b>1944</b>			
January.....	196	168	117
February.....	195	169	115
March.....	196	169	116
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115

<sup>1</sup> Ratio of prices received by farmers to price paid, interest, and taxes.

rated milk, dried whole milk, and American cheese, especially if non-civilian demands for these products remain fairly large.

In the West North Central States, slight declines in milk production are probable if manpower difficulties continue and if present price relationships among dairy products are maintained. As a consequence, 1945 creamery butter production in that area may drop below 1941.

Milk production per cow during October and November exceeded the equivalent output in 1943 for the first time this year—production per cow ran behind in all preceding months. Dairy pasture conditions in October likewise improved generally throughout the country, being above average on the first of the month. Because of improved feed supplies and because of dairy production payments, not in effect until nearly the end of last year, rates of feeding generally were much heavier this fall than a year earlier.

Reflecting manpower difficulties in dairy areas, the percentage of cows milked this fall was low, being only about 66 percent of all milk cows on November 1, the lowest for that date since 1925. This is the only unfavorable aspect of the milk production picture at the farm level.

## COTTON

**T**HE 1944 yield of cotton is now expected to be 295.3 pounds per acre, nearly 8 percent above the previous record in 1942 and 30 percent above the 1933-42 average. All-time record yields were indicated for Alabama, Arkansas, Georgia, Mississippi, North Carolina, and Virginia.

This record yield is being achieved from 20,098,000 harvested acres, about 24 percent smaller than the 1933-42 average and the smallest acreage of any year since 1895. Reasons for the acreage being smaller than in other recent years include: (1) Unfavorable weather at planting time; (2) availability of alternative crops, with more returns in many areas; and (3) tight labor situation, which made a shift from cotton to less labor-intensive crops desirable.

The tight labor situation is one of the principal causes for the relative delay in harvesting the 1944 crop, currently estimated at 12,359,000 bales or only 1 percent below the 1933-42 average. The tight labor situation is also partly the cause of the further advance in picking rates from \$1.66 for 100 pounds of certain cotton in 1943 to a record high of \$1.92 per 100 pounds this fall.

## POULTRY AND EGGS

**P**RICES of poultry meat from December through March 1945 will be at ceiling levels. Supplies of chicken meat available for civilians will be far below that of the previous year. The 20-percent decline in the number of chickens raised in 1944 from that of

1943 and smaller quantity of broilers raised during the last half of 1944 than in the previous year both combine to place supplies short of civilian demand. Furthermore, large military requirements probably will take a good portion of the poultry marketed so that available supplies for civilian use will be significantly less than in the previous 2 years. Continued high consumer incomes and smaller supplies of other meat will further add to heighten an unsatisfied civilian demand.

Egg prices will decline seasonally for the next few months and probably will be somewhat lower than the corresponding months of 1943 and 1944. Because shell eggs are a proclaimed crop under the Steagall amendment, significant declines, however, are not expected.

Egg production during October continued at a record level, with an output of 273.2 million dozen. This was 10 percent above the quantity produced in October 1943 and 59 percent

above the 1933-42 average. This record output was the result of many favorable factors, among which was the largest number of layers on farms for any October—375 million—easier feed supplies, and very favorable weather.

## TRUCK CROPS

**E**ARLY winter truck crops had made generally satisfactory growth well into November, and, except where delayed by rains on the west coast, harvesting was progressing satisfactorily. By mid-November, fall truck crops in northeastern areas were largely harvested, although considerable acreages of beets, cabbage, carrots, and cauliflower in New York remained to be gathered.

In California, rains held up field work for 2 weeks prior to mid-November and limited harvesting. However, winter crops of artichokes, broccoli, cabbage, and cauliflower benefited from the additional moisture. In the

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State

	5-year average		November 1943	October 1944	November 1944	Parity price November 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars	0.884	0.837	1.37	1.42	1.43	1.61
Corn (bushel).....do	.642	.691	1.05	1.13	1.06	1.10
Oats (bushel).....do	.399	.340	.752	.659	.662	.682
Rice (bushel).....do	.813	.742	1.90	1.70	1.74	1.39
Cotton (pound).....cents	12.4	10.34	19.40	21.25	20.78	21.20
Potatoes (bushel).....dollars	.697	.717	1.33	1.42	1.43	1.24
Hay (ton).....do	11.87	8.87	14.50	15.20	15.60	20.30
Soybeans (bushel).....do	1.96	.984	1.80	2.04	2.05	1.64
Peanuts (pound).....cents	4.8	3.55	7.12	7.71	8.08	8.21
Apples (bushel).....dollars	.99	.90	2.24	2.05	2.10	1.64
Oranges, on tree, per box.....do	1.81	1.11	2.24	2.70	2.07	2.01
Hogs (hundredweight).....do	7.27	8.38	12.90	13.80	13.50	12.40
Beef cattle (hundredweight).....do	5.42	6.56	10.60	11.60	11.60	9.27
Veal calves (hundredweight).....do	6.75	7.80	12.40	12.90	12.90	11.50
Lambs (hundredweight).....do	5.58	7.79	11.90	12.20	12.20	10.10
Butterfat (pound) <sup>1</sup> .....cents	26.3	29.1	50.9	50.3	50.7	47.5
Milk, wholesale (100 pounds) <sup>2</sup> .....dollars	1.60	1.81	3.39	3.84	3.39	3.06
Chickens (pounds).....cents	11.4	14.9	24.3	23.8	24.0	19.5
Eggs (dozen).....do	21.5	21.7	47.1	38.8	43.4	47.1
Wool (pound).....do	18.3	23.8	40.3	40.3	40.4	31.3

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

desert valley areas of the State, rains did not interfere materially with operations and crops made fair progress.

In Texas, weather was favorable for plant growth and harvest, but continued dry weather delayed field work in the nonirrigated districts. Temperatures favored development of snap beans, eggplant, peppers, and tomatoes. Hardy crops such as beets, cabbage, carrots, cauliflower, and spinach made rapid growth, but a widespread outbreak of blue mold and some worm damage lowered yield prospects for early spinach.

In Florida, weather was generally favorable, though additional rain over most of the State would be beneficial. Crops planted or transplanted immediately after the October hurricane were generally making good progress.

## FRUIT

**T**HE 16 million tons of fruit produced in 1944 sets a new record. Production of deciduous fruit amounted to approximately 9.5 million tons, 18 percent more than in 1943 and 5 percent more than the 5-year (1935-

39) average. Production of citrus fruit in 1944 amounted to about 7 million tons—a record large production.

The new 1944-45 citrus crop, now being marketed, is expected to be only about 6 percent smaller than the record large 1943-44 crop despite heavy hurricane losses in Florida. The orange crop is expected to be nearly as large as last season but the grapefruit crop about 15 percent smaller.

Available from storage stocks for consumption fresh will be cranberries and grapes until early winter and apples and pears until spring. Approximately one-half of this year's crop of deciduous fruit is being used fresh and the remainder processed. In contrast, about 70 percent of last season's crop of citrus fruit was used fresh and the rest processed.

A strong demand for fruit continued throughout 1944, with prices received by farmers generally averaging near the high levels of 1943 and about twice those of the 1935-39 period. The present strong market for fresh fruit is expected to continue during late fall and winter.

## Production Adjustments Ahead

**O**NCE more the Nation's farmers have delivered in full measure to meet the insatiable needs of war. Once again, and for the sixth successive season, the volume of total agricultural output has topped the previous year, with 1944 output a third higher than the average for the 5 pre-war years of 1935-39. This is a record to be expected of the patriotic farmers of a nation at war if all the resources needed in agricultural production had been fully available. But it represents, instead, the achievement of an agricultural plant operated under serious handicaps.

Systems of farming have been subjected to radical change in some regions, and everywhere ways have had to be devised to counteract shortages of skilled farm labor. The newer farm machinery has had to be carefully husbanded and the old patched up and made to do. Certain of the fertilizer constituents have been relatively scarce in relation to the quantities farmers wanted to buy and sometimes available only in unfamiliar forms. Shortages of feed grains and concentrates have developed in some regions, and farmers have had to experiment with the use of new feeds

and the production of unfamiliar crops. Despite the generally favorable weather, late wet springs in the past 2 years have taxed the ingenuity of farmers in getting crops planted.

Over against these handicaps have been the advantages of entering the war period with large reserves of feed, with a farm plant much of which was stocked with relatively new labor-saving, mechanized equipment and with land that could be temporarily shifted to producing the more intensive crops needed for direct human consumption.

Farmers have capitalized further on the increased yields from hybrid corn. While this is spectacular, it is but indicative of the wartime increases in yield of a multitude of crops. In 1944, for example, on less than half the former cotton acreage, farmers produced 85 percent as much cotton as in the average year of the 1923-32 period. This was made possible by increasing the rate of fertilizer application per acre and by fertilizing more acres than in earlier years. With fewer acres in cotton, the crop is now being grown on the more productive land, and here, too, improvements in varieties are registering their effect. The acreage in winter cover crops in 1934 was 324 percent of that for the 1935-39 period, and much of this was also in the South, where soils are especially vulnerable to erosive forces during the winter months.

Livestock production parallels this record of crop achievement. Nearly 108 million animal units of productive livestock (exclusive of horses and mules) are on farms as 1944 draws to a close, a number some 16 million animal units above the previous record in 1934 and some 23 to 28 million animal units above the general level for the three decades prior to Pearl Harbor.

More feed was fed to livestock in 1942-43 than ever before, with the 1943-44 feeding year a close second. Such large numbers have taken not only more feed in total but increasing supplies of oilseed meals have more

than offset the decreases in animal protein feeds to permit wartime rates of consumption of high protein feeds in total that have averaged well above the immediate pre-war period and still further above the consumption rates for the years 1926-34. Indeed, it is now estimated on the basis of suggested livestock goals and the probable production of high protein feeds that it is possible in 1944-45 to use high protein feeds at a rate resulting in much the highest consumption on record. Livestock production per unit, like that for crops, has responded to improved practices such as better feeding, better care, and improvements in breeding.

These man-made efforts have been underwritten by a continuing period of generally favorable weather, but weather alone can be credited with only 8 to 10 points of the 33-point rise in the index of total agricultural output over that prevailing in 1935-39.

This quick review of recent production trends may be helpful in considering production in 1945 and the years ahead. Increases in production efficiency will probably be even more pronounced when all the resources normally available for agricultural production are again at hand. Current achievements definitely indicate the ability of the Nation's farm production plant to deliver for another wartime year (assuming average weather conditions)—and as many in the future as may be required.

For the year ahead, meeting the needs of an adequate supply of monthly and seasonal labor in all parts of the Nation may be the most troublesome bottleneck. In the fortunate event of an early VE-day, some returning war workers, and even some soldiers, may assist in the 1945 harvest, but it would be much safer to count on carrying on with the present improvised labor force.

Steel is now available to meet the needs for farm machinery, with manufacturing production schedules promising to bring relief for numerous types



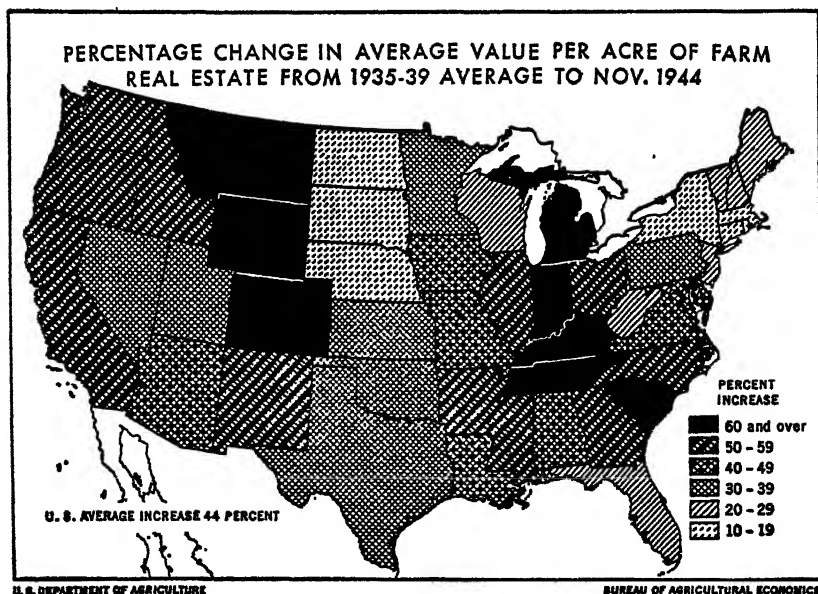
of equipment. Here again, however, realization of production schedules will depend upon the skilled labor available to manufacturers. Farmers are not likely to be able to buy all the new machines they want for 1945. It will still pay to depend upon the machinery on farms in 1944 to do the bulk of the 1945 production job. Potash supplies will probably exceed those for 1944, with the quantities of nitrates and phosphates approaching that level but still dependent upon the fortunes of war.

Concentrate feed supplies will be more than adequate for prospective livestock numbers in 1945. Hay should be abundant in most areas, and the pasture season should open in generally good condition. All in all, the problems facing farmers in maintaining wartime levels of production for another year should be no greater, if as great, as those of the past season.

Each additional year of wartime production, however, makes greater inroads upon the Nation's fertility reserves, results in increased problems of weed and pest control, and otherwise violates some of the important agro-

nomic and biologic principles temporarily abandoned in the continuous wartime production of the more strategic products. In some regions the production trends have already accelerated desirable adjustments for the post-war years. In others, considerable time and effort will be necessary to return again to proper crop rotations and the development of balanced systems of farming to conserve resources and yield profitable levels of farm living.

Many had hoped that an early capitulation in Europe would relax the strain of producing for all-out war, but continued high level production of most products will be needed in 1945. We are, however, 1 year nearer the firing of the last shot over Tokyo. Enough has been said to indicate the tremendous potentialities of the Nation's agricultural plant in wartime and its implications for abundant post-war production. Farmers will do well to husband their wartime gains and to study carefully the means by which physical and financial resources may be maintained or improved in post-war years.



This generalized statement of adjustments in farm production outlines a remarkable wartime development in the Nation's agricultural plant. This development has tremendous implications for the years of peace ahead. But first consideration must be given to the completion of wartime commitments—to the specific adjustments farmers are facing in 1945 in different regions of the country. What these production problems are in four of the

main agricultural regions of the country is summarized in the following reports on the Northeast, Appalachian, Southeast, and South Central States. The January issue of the *Agricultural Situation* will complete this regional round-up with reports on the Corn Belt, Lake States, Great Plains, and Western States.

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## The Northeast

**N**ORTHEAST agriculture in 1945 has both the incentives and the means to continue at a high level of food production, with most farmers of the region<sup>1</sup> finding it profitable to operate at capacity. With the national feed situation more favorable and with further shifts to tractor operation, there will be less reason than in 1944 to grow feed grains, permitting larger acreages of food crops. War industry conversion may result in less off-farm work for both full-time and part-time farmers in 1945 and may also change the demand picture in some markets. But the big adjustment problems facing northeast agriculture relate to later years rather than 1945.

### Dairying

Milk production, the dominant enterprise in northeast farming, has possibilities in 1945 of equaling the record level of 1942. Cow numbers on January 1, 1945, probably will be higher than a year earlier, and price relationships are likely to be such as to encourage heavy feeding and good production per cow. Although demand for fluid milk will be generally high in 1945, it may not be equally good in all markets, as an early end of the European war with resulting reconversion problems might reduce

employment and consumer demand in some cities.

What can northeast farmers do on their own farms to best meet the generally high demand for milk in 1945 and to be prepared for the unknown of the post-war period? The best solution seems to lie in the direction of further efforts to increase the efficiency of milk production. The most promising methods for the next few years probably are forage improvement and the wider adoption of new techniques for haying and doing chores.

### Forage Improvement

Forage improvement includes various steps to obtain more and better feed during both the barn-feeding and the pasture seasons and thereby to increase production per cow and hence low-cost milk. A common recommendation is to increase forage yields to a point that a cow could be carried adequately on no more than 1 acre of permanent pasture and 2 acres of cropland, some of the latter furnishing pasturage during the late summer. Individual farmers are already meeting or exceeding this goal, but to date farmers are not completely agreed as to the profitableness of certain steps such as improving permanent pastures. The evidence seems to indicate it will pay on the majority of northeast farms to improve an acreage that can be utilized efficiently during the flush

<sup>1</sup> New England, New York, Pennsylvania, New Jersey, Delaware, Maryland.

growth period of May and June. It is generally agreed, however, that the big pasture problem and the greatest opportunity for improvement is during late summer when permanent pastures produce very little and reliance must be placed on other types of pasture.

Forage improvement programs require years for widespread adoption, but with high demand for milk and satisfactory farm incomes in prospect for the coming year, 1945 should be a good time to make some real progress. The first objective of such programs, of course, is more efficient milk production, but they might also free large acreages of land for other uses. For example, the Northeast now uses about 15 million acres of permanent pasture and considerable woodland areas for pasturing 5 million roughage-consuming animal units. Even with a considerable increase in livestock and in roughage consumed per animal, particularly during the late summer, several million acres of pasture could be released for other uses such as cropping or forestry and recreation if extensive progress were made in pasture improvement.

### **Labor Techniques**

Opportunities are great to increase output per man and to obtain better forage on dairy farms through recently developed techniques. One such opportunity is improvement in haying methods to lessen the labor load during that season. A number of new developments, such as grass silage, buck-rakes, pick-up balers, and mow driers, having entered the picture. All of these have been aimed either at more efficient use of labor, at better roughage, or both. Tremendous war demands for food, along with labor shortages, have undoubtedly hastened the development of such devices. It is too early to be certain of the future of these methods, but it is likely that most of them will expand in use. In any case, it seems clear that haying can become less of a problem and also that better hay can be obtained, with

additional progress in this direction quite probable in 1945.

The traditional 10 minutes to milk a cow has meant that it required 2 man-hours for hand milking a herd of 12 cows. This, plus other chores in barns not too well arranged for efficiency, has restricted the average number of cows handled per man to about 8-10. Now farmers using quick milking practices are milking cows at much faster rates. In New Hampshire, for example, 2 farmers with a milking machine milked 30 cows in 37 minutes. Perhaps conditions were ideal on this farm, but better records will undoubtedly occur. It seems reasonable that this procedure might eventually reduce milking time on most commercial dairy farms to perhaps one-half the customary time at present. It is probable that more milk per cow will result directly from the practice, but its biggest possibilities seem to lie in the fact that it permits the labor force to handle a much larger herd.

### **Poultry**

Although northeast poultry producers during the early part of 1944 were faced with a feed shortage which did not become serious, the biggest problems of poultrymen in 1944 were those of markets and price relationships. But on the whole, bird numbers held up remarkably well, and new egg production records will be set in 1944 both for the region and for the United States. There is no prospect of a poultry feed shortage in 1945.

Egg production, both in the United States and in the northeast, probably will be lower in 1945 than in 1944. More eggs may be available for civilians, however, because of prospective declines in lend-lease requirements for dried eggs. Producers may encounter some marketing and price problems in the spring of 1945, and adjustments to meet such a situation next spring may be difficult. But in later years egg producers might review the question of seasonal costs and returns and possibly shift toward heavier fall production and lighter spring production.

An important feature of the north-east poultry industry is its organization by size of flock. In 1940 about 70 percent of the chickens were in flocks of less than 700 birds and, roughly, 10 percent were in flocks of less than 50. The wartime expansion has taken place in all types of flocks, but the outstanding increase generally has been in flocks of less than 700 on general farms or on part-time farms and rural residences. Problems are quite different with flocks of this type than those with the large-scale specialized type of flock. With the smaller flocks, labor often is supplied entirely by the family, and in the case of general farms the feed may be largely home-grown. Because such production, even though based on lower production per bird, is less sensitive to changing price relationships than production by the specialized type of flock, it might better withstand the possibility of severe interregional competition in the post-war period.

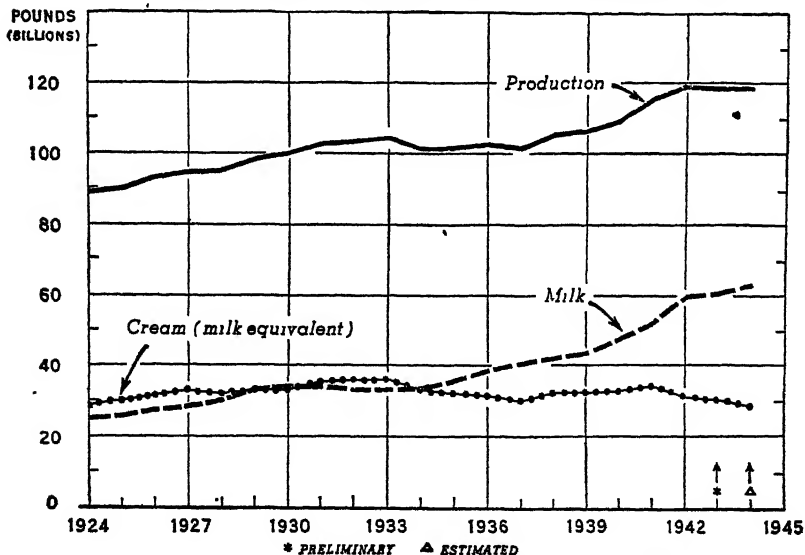
The Northeast poultry industry has

developed on the basis of nearby markets for fresh, high-quality eggs, and high-production efficiency. In the post-war period it may be more important than ever before to maintain the lead in efficiency and quality of production.

#### Potatoes

The 1944 potato crop is the second largest since 1934 for the United States and also for the Northeast. Nevertheless, if prospective noncivilian requirements are met, civilian consumption per capita from this year's crop will be about as low as for any year on record. It seems likely that potatoes from the 1944 crop will sell generally at levels close to ceilings and that producers will plant the 1945 crop in an optimistic frame of mind. Furthermore there will be less incentive than in 1944 to plant feed grains. The result could easily be an acreage of potatoes higher than this year and with average yields, a production considerably above that of 1944.

**MILK PRODUCTION ON FARMS AND QUANTITIES SOLD WHOLESALE AS WHOLE MILK AND AS CREAM, UNITED STATES, 1924-44**



Some leading Northeast areas probably are growing more acres of potatoes than can be maintained indefinitely without sacrificing soil productivity and crop yields. At the same time there are real possibilities of increasing potato yields and production efficiency in the Northeast, even in those areas already having high yields. This can be done partly by wider adoption of long-recommended practices such as use of improved seed, green manure, suitable rotations, and adequate fertilization. Other possibilities lie in more recent developments such as irrigation, new varieties, contour cropping, improved spraying through spray rings, and various methods of fertilizer placement. Greater use of these practices, both old and new, will help potato growers meet the relatively high requirements of 1945 without much increase in acreage and be prepared for the uncertainties of later years.

In the post-war period some changes in Northeast potato acreage may be desirable. Maine in particular has expanded potato acreage materially and some reduction may be indicated in the long-time interest of sustained crop yields. New Jersey likewise with a large increase has the further problem of a short marketing season and insufficient storage facilities. In several Northeast States, a post-war re-

duction in production of soybeans for oil would release land—some of which could be used for potatoes, vegetables, or soybean hay. In New York and Pennsylvania a large share of the crop is still produced on farms growing less than 10 acres of potatoes. Although spray rings have made small acreages more feasible, it is likely that the trend will continue toward larger acreages per farm.

### Truck Crops

Northeast vegetable acreage, both for processing and fresh market, has expanded to meet war needs but some further increase is possible in 1945, particularly with an improved labor situation as indicated.

From a longer time point of view the question of interregional competition in the vegetable industry becomes important. Improvements in transportation may bring distant producing areas closer to Northeast markets in terms of time and cost. Expansion of quick freezing, however, may tend to favor areas of most efficient production. A large part of the Northeast vegetable industry is based on favorable production conditions as well as nearness to market, and with continued improvement in methods should be able to at least maintain itself.

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## Appalachian Region

AGRICULTURAL adjustments in the Appalachian region—Virginia, West Virginia, North Carolina, Kentucky, Tennessee—have been influenced by three conflicting conditions: (1) The worst drought in many years over large segments of the region in 1944, (2) determined effort of farmers to keep wartime agricultural production high and take advantage of high incomes made possible by high prices, and (3) increasing concern over

the need for quick adjustments to be made at the close of the war—for conserving land resources and maintaining balanced farming systems.

The 1944 drought, most critical in Kentucky and Tennessee, threatened forage and pasture production, bringing temporary pressure for immediate reduction in livestock numbers. Short water supplies added to the difficulties of retaining livestock. Prospects for less home-grown feed supplies at a

time when feeds are high priced relative to livestock further helped the liquidation along.

But continued wartime demand for farm products of the region means that production must be kept at maximum capacity for at least another year. In fact, increases above 1944 levels for some products are needed if prospective goals are to be attained.

For the long-term picture, though, farmers feel that they are near peak production now for many products, especially in view of prospective prices, costs, and the availability of production resources. They anticipate that sharp adjustments at the close of the war will be necessary to avoid temporary market gluts as well as the need to bring into effect greater conservation of soil resources just as rapidly as the tapering off of war demands will permit.

#### **Tobacco—Cotton**

Tobacco and cotton are the major cash crops. Peanuts, soybeans for beans, wheat, hemp for seed, seed crops, and certain truck crops have received special emphasis as war crops. Hemp for seed, which expanded sharply in 1943, lost its emphasis as a war crop and when price supports were withdrawn the acreage dropped to about the pre-war level. Seed crop acreages in 1944 continued their expansion over 1943, with some further gains indicated for 1945. Truck crops, including potatoes, after a decline in 1944 from the high level of 1943, show considerable capacity for expansion in the year ahead. Labor will be a seriously limiting factor.

Tobacco is the dominant source of cash farm income of the region. At current prices it provides a very favorable return to the farmers for labor and resources, may be expected to out-compete other enterprises and will get first claim on these resources where it is grown. The 1944 acreages of burley and flue-cured tobaccos, the dominant types grown in the area, were up 15 to 20 percent over 1943. Present cost-return relationships for

tobacco will encourage farmers to press for higher tobacco acreages, up to and even beyond quotas now prevailing. Expansion, particularly in the border areas, may be expected as farmers seek the most immediately profitable use of their labor and land.

Increased fertilization for higher tobacco yields under existing high tobacco prices may be expected if the supply of suitable fertilizer is available. Although labor and barn space have been short in some areas, the present and near-term profitableness of the tobacco crop will see these limitations overcome. Much tobacco is grown on small farms where the work is done by family labor or on larger farms where tenant labor is available, so that the necessary labor supply is flexible and adjusted to tobacco production in preference to other needs.

Over the longer period ahead tobacco acreage and production will have to be adjusted to available market outlets, gradually shifted toward areas where family labor can handle the crop, and to the soils which produce relatively high-quality leaf. Emphasis on heavy application of fertilizers and manures, and on the use of winter cover crops in the tobacco rotation may be expected to continue.

Cotton acreage seems to have stabilized at about 10 percent below the 1937-41 level. As a longer time adjustment even further reduction is in prospect, particularly in the upland areas where the control of erosion is difficult. Some shift of cotton acreage to better land, and heavier applications of fertilizer would maintain production even with fewer acres of cotton. The delta areas will probably continue a fairly rigid cropping system with cotton acreage near or above the 1944 level.

#### **Peanuts—Soybeans**

Peanuts picked and threshed averaged 393,000 acres for the period 1937-41. Under pressure of war for more peanuts, acreage moved up about one-fourth by 1943 and is holding slightly below that level. Except for

some of the harvesting operations, the crop lends itself to mechanization and fits well in an intensive cropping system. A continued high level of production may be maintained during the war, but the return to peace may bring a quick curtailment of acreage both in the interest of conservation of land resources, and to balance supplies with prospective needs.

Expansion of soybeans (harvested for beans) was encouraged in the region as the need for vegetable oils increased. Except for delta areas and to a lesser extent the coastal plains, the crop proved rather disappointing in this region as a means of increasing food supplies. Droughts in both 1943 and 1944 added to the limitations farmers otherwise experienced. Comparatively low yields, the competition of expanded livestock enterprises for legume hay, and the soil-depleting effects of the crop, all mitigated against soybean expansion, especially outside of delta areas. The post-war period should see a gradual withdrawal of farmers in the uplands from soybeans both for beans and for hay in favor of more satisfactory feed crops.

The acreage of soybeans for beans in 1943 was more than double that of the pre-war period 1937-41, but a 5-percent decline occurred in 1944. Under considerations for the wartime needs, State agricultural workers have estimated that a 30-percent increase in the 1945 acreage over that planted this year is possible. However, competition from other crops, high costs for contract harvesting, and soil-depleting effects are serious limitations to such an attainment.

#### **Wheat—Potatoes**

Wheat production, most of which is on a commercial basis in the Appalachian region, increased about 20 percent during 1944 and was slightly above its pre-war level of 1937-41. Post-war adjustment should replace a part of the wheat acreage with feed grains, particularly in some areas such as western Tennessee and Kentucky where livestock enterprises are an

expanding part of the farming system.

Other minor crops of the region, such as potatoes and sweetpotatoes, were down in 1944 compared to the previous year, but can expand in 1945.

#### **Livestock—Feed**

Even though livestock numbers, except for workstock, sheep and lambs, were higher on January 1, 1944, than a year earlier, downward adjustments in all livestock occurred during 1944. This was probably more marked in Tennessee and Kentucky where weather was most unfavorable. The reduction in livestock has been carried too far for normal weather conditions, and is so indicated in the 1945 production adjustment suggestions for livestock numbers to be fed from 1944 crop production.

Workstock have continued a long-time decline, in progress for many years, while sheep and lambs have been reduced in the war period partly because of the inroads made by crop expansion onto pasture lands, and partly because of the relatively more favorable use of land for other livestock enterprises.

Suggested goals for 1945 call for an increase of sheep and lamb numbers to about the 1943 level, 20 percent less hens and pullets than in 1944, and small increases in milk cows, though holding total cattle and calf numbers a little below 1944. Total sows to farrow in 1945 would be approximately the same as in 1944.

The feed-grain and hay-crop acreages in 1944 were about the same as in 1943. Corn, all tame hay, and sorghums were up slightly, while oats and barley for grain were down. Capacity to provide more feed for livestock is indicated generally throughout the region. The main increases could come from: (1) larger acreages of oats and barley for grain, (2) a better legume mixture in hays and pastures, (3) winter grazing of small grains both for harvest and for grazing only, (4) hay and pasture following small grain crops, (5) larger acreages of winter pasture, and (6) supplementary pas-

tures for summer grazing during periods of drought. The long-time adjustment in the feed-livestock situation could aim at this together with further extension of the lime and phosphate program to bring increased forage and pasture production.

Dairy cattle numbers could continue a gradual expansion over much of the region. Sheep and lamb numbers could remain fairly stable in the bluegrass pasture areas and probably resume the long-time downward trend elsewhere. Beef cattle will occupy the residual grazing and gain in numbers as greater pasture and feed resources, not needed in dairying, are made available. Hens and pullets will remain in a relatively strong competitive position in the region. In view of the probable trend away from row crops toward pasture and forage crops over much of the region, a larger percentage of the total concen-

trate feed will be needed by animals which utilize pasture and forage. Hog numbers, therefore, may be reduced below present levels.

#### Labor—Machinery

While labor shortages have been disturbing in local areas, the high flexibility of the labor supply of the region has again been demonstrated in 1944 in producing and harvesting a relatively large crop with very little loss. Not much change in the situation may be expected for the duration of the war. Limitations on production due to lack of materials are largely local and will so continue. Prospects are favorable for increased quantities of machinery, fertilizer, and seeds in the year ahead. The shortage of trucks and labor may still continue to hold the distribution of lime below that of previous years.

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## The Southeast

**A**LATE, WET spring in the Southeast<sup>1</sup> resulted in a very poor planting season in 1944. Furthermore, large numbers of farm workers left the farm during 1943 and 1944 to accept employment in war industries. Largely because of these factors the 1944 acreage planted to crops in the region was nearly 1¼ million acres less than in 1943.

#### 1944 Crop Changes

Tobacco, small grains, and lespedeza hay were the only major crops in 1944 to show increases over 1943. Significant decreases occurred in the acreage of cotton, peanuts, corn, cowpeas, and soybeans. The increase in tobacco acreage resulted from very favorable outlets and prices for to-

bacco, whereas the increase in small grain and lespedeza—primarily on the larger farms—represents a trend to crops requiring less labor.

#### Idle Land

Almost 5 million acres of cropland in the Southeast, roughly a seventh of the total in the region, remained idle in 1944, but much of the idle land was of poor quality and should not be put back to intensive crop production. Conservation measures could be applied to the best idle land, with much of it seeded to lespedeza or other grasses, thereby affording some pasture and also retarding erosion. Some of the idle land could be returned to woodland because it is so low in fertility and so badly eroded.

The 1944 yields per acre of most major crops were considerably above the average of recent years. There-

<sup>1</sup> South Carolina, Georgia, Florida, Alabama, Mississippi.



fore, despite reduced acreages, the 1944 production of the major cash crops, cotton and peanuts, was considerably larger than in 1943.

### **Cotton**

Unfavorable planting weather was primarily responsible for the low cotton acreage in 1944, which might have been nearer the 1943 acreage had the planting season been favorable. Anticipated labor shortages at harvest-time were also a factor holding down the acreage planted. Another factor was favorable prices for peanuts in areas where competition of the two crops for land is important. As a result, farmers gave preference to the planting of peanuts when planting weather was available. The combined acreage of cotton and peanuts planted was considerably below that of 1943, with cotton taking most of the reduction.

Favorable growing weather following the late wet spring, good harvesting weather, heavier applications of commercial fertilizer, and use of the better land all resulted in an 8-percent increase in cotton production on 8 percent fewer acres. Under present and prospective price and cost relationships, cotton will return a larger net income per acre than other crops in many areas of the region. But because cotton production requires large amounts of labor, many farms with a limited labor supply can be made more profitable by reducing cotton acreage still further, substituting crops requiring less labor.

### **Labor Factor**

Slight increases in the cotton acreage on farms having an adequate labor supply appear feasible in areas such as the Mississippi Delta, high-yielding areas in the hill sections of Alabama and Mississippi, and in some parts of the Piedmont of South Carolina and Georgia, but decreases may be desirable in such areas as the Black Belt of Alabama and Mississippi, and in many sections of the Coastal Plains where

peanuts and other crops compete favorably with cotton for the use of labor and land.

### **Peanuts**

Although the need for peanuts and peanut oil may not be as great in 1946 and later as during the last few years, about the same acreage and production as in 1944 appears desirable for 1945. With the prices likely to prevail in 1945, the returns from peanuts in suitable areas will compare favorably with competing crops.

The acreage of peanuts planted for hogging-off could be expanded profitably in 1945 to release locally produced corn for feeding other classes of livestock. Hogging-off of peanuts is both an efficient method of producing pork and a good soil-building practice. The peanut acreage hogged off in 1944 was below the goal and represented the smallest portion of the total "grown alone" peanut acreage in many years. The favorable price of peanuts in relation to hog prices is largely responsible for this situation. Prices in 1945 will be relatively more favorable than in 1944 to hogging-off peanuts.

Too many peanuts or not enough in relation to the amount of suitable land were grown in some areas of Georgia and Alabama in 1943 and again in 1944, and the goals programs have not given sufficient consideration to this situation. In such areas the suitable land on many farms is being used for peanuts once every 2 years or oftener. The result will be serious damage to the soil unless acreage is reduced to a point where suitable land is not used for peanuts more than once in 3 years. Outside the more concentrated areas, however, particularly in those coastal plain areas of South Carolina, Georgia, and Alabama, where relatively small acreages are being grown, possibilities are good for further expansion in 1945.

### **Tobacco—Potatoes**

Under present and prospective 1945 price and cost relationships, tobacco, where its production is adapted, will

return larger net incomes per acre than competing crops. The acreage in 1944 was larger than in 1943. Tobacco in 1945 is likely to continue getting the first call for labor and land in areas adapted to its production. The acreage probably will be increased, and a slight increase appears desirable.

Indicated sweetpotato yields for 1944 are well above those of 1943, with the result that volume of production should be almost as great as an acreage 8 percent smaller. Some increase in 1945 acreage over 1944 in areas having marketing facilities, and in many areas for home use and feed, appears desirable.

No increase in the acreage of early Irish potatoes is suggested. Yields in 1944 were well below normal, yet substantial difficulties were encountered in marketing the crop. With normal yields next year, and an acreage no larger than in 1944, an adequate quantity of early potatoes would be produced. Some reduction in acreage appears desirable in Mississippi.

### Feed Grains

The 1944 planted acreage of all small grains was 264,000 acres over 1943, but corn acreage declined by 500,000, resulting in less total feed grain production during 1944 than in 1943. Adverse planting weather and the priority of cash crops for the limited labor supply, along with increasing small grain acreages, was responsible for the decline in corn acreage.

Corn acreage should not go below 1944 levels in the years immediately ahead unless the decrease is more than offset by increases in small grain acreage. An increase of 25 percent in total small grain acreages for 1945 would be feasible, with most of the increase in oats. Emphasis should be placed on more small grains in all areas of the Southeast and especially in the Piedmont.

In most areas small grain yields compare favorably with corn in terms of digestible nutrients per acre. In

addition, small grains have a number of advantages over corn in many areas, important among them being that small grains can be followed with a legume hay crop, usually lespedeza, thus getting two feed crops in 1 year from the same land. Furthermore, the growing of small grains normally means a better cover during the winter than would otherwise be the case. The availability of an adequate quantity of seed of improved varieties will facilitate this shift.

Small grains for grazing should also be increased again in 1945—to provide winter and early spring grazing for all classes of livestock, particularly for hogs and dairy cows. It has always been difficult for coastal plains farmers to feed their hogs until peanuts are ready to be grazed off.

### Hay—Pasture—Cover Crops

Next year's hay acreage could be increased substantially by following a greater proportion of the small grain acreage with lespedeza. This is perhaps the most satisfactory for obtaining larger quantities of hay. Owing to high cost and scarcity of seed, this year's acreage of cowpea hay was greatly reduced, so that an increase of as much as 40 percent is desirable for next year in the interest of utilizing available cropland and providing a more balanced ration for livestock on hand. Soybean hay acreage was also low in 1944 and should be increased where feasible.

Southeastern farmers should expand the acreage of kudzu and sericea lespedeza as rapidly as possible. Not only are they valuable hay and pasture crops but they are considered by most agricultural workers to be one of the best ways to arrest erosion.

Although cover crops have been recommended for many years, less than 15 percent of all cropland in the Southeast was so covered during the winter of 1943-44. About half this acreage was covered with small grains, the other half with Austrian winter peas and vetch. Obstacles to the

successful production of Austrian winter peas and vetch are numerous, but blue lupine, a newcomer, seems to have possibilities. Planting of the latter has been rapidly expanding within the past 3 years, with its use expected to expand tenfold within the next 4 or 5 years. Blue lupine seems particularly adapted to the coastal plains areas of Georgia, Florida, and Alabama, and it may have an advantage over other winter legumes—because results indicate that seed might be produced locally.

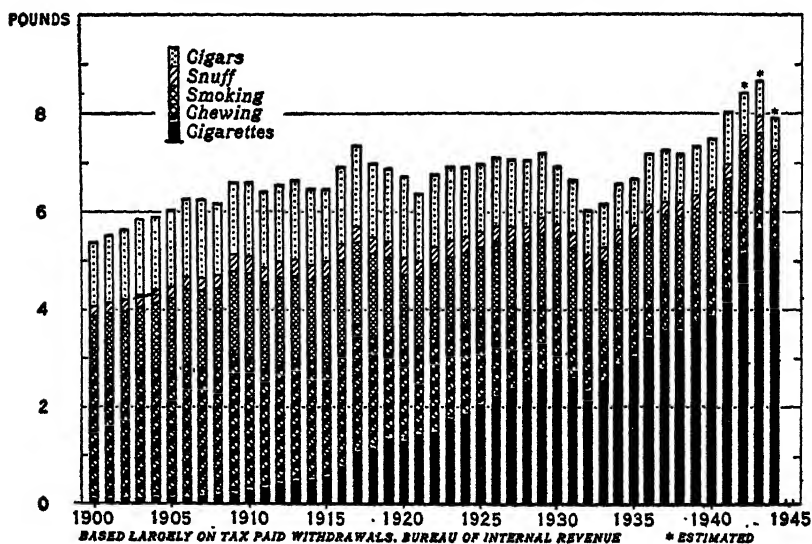
Along with the need for better grain yield goes the need for improved pastures in the Southeast, where acreages continue to be totally inadequate. There are many reasons for this. In the first place, costs of establishment are very high, in many instances amounting to as much as the value of the land where the pasture would be established. Secondly, information concerning the suitability of different soil types and conditions for pasture is inadequate. Nevertheless, southeastern farm operators should take

advantage of AAA assistance to establish as much pasture as possible in the next few years. The availability of pasture, a cheap source of feed, will become more important in maintaining livestock numbers as prices received for livestock products return to normal relationships.

#### Livestock

Acreage and production of feed crops this year was considerably below that of 1943, in spite of the fact that larger numbers of livestock will be on hand next January 1 than a year earlier. This means that production of some livestock will have to be reduced in 1945. Indications are that production of commercial broilers and number of sows farrowing should show some reduction and that marketings of cattle should be somewhat heavier than during 1944. To prevent egg marketing difficulties the number of hens should be reduced slightly, with an effort being made to distribute production more uniformly throughout the year. An increase in the number of turkeys raised would be desirable.

### TOBACCO PRODUCTS: CONSUMPTION PER CAPITA IN THE UNITED STATES, 1900-1944



The Southeast is a deficit area in the production of dairy products, yet local needs for milk make advisable higher production of that commodity even if heavier feed imports become necessary. The outlook for feed supplies in other parts of the Nation has been materially improved by excellent feed crop yields and a downward adjustment of livestock numbers during 1944. For this reason substantial quantities of grain should again be available for shipment into the region.

### **Crop Management Practices**

Increased emphasis in 1945 should be placed on improved practices as a means of increasing yields and total production. Heavier applications of fertilizer offer the greatest opportunity. This is particularly true of corn, cotton, and small grains, even though average per acre applications have increased steadily during the war.

The Mississippi Experiment Station results indicate that the application of 32 pounds of nitrogen will return 10 to 15 bushels more corn per acre in nearly all parts of the State. It has been estimated that average fertilizer applications on cotton could be profitably increased an additional 100 to 150 pounds per acre with present price relationships.

Opportunities for increasing small grain yields are also excellent. Much can be done in 1 year's time. Data from the Alabama Experiment Station indicate that each 16 pounds of nitrogen up to and including 48 pounds per acre will increase the yield of oats 10 bushels per acre. Data from other Southeastern experiment stations show comparable results.

Experimental results indicate that peanuts should be fertilized with about 400 pounds of a suitable complete fertilizer if for no other reason than to maintain the level of soil productivity. Few farmers follow this practice at present, because a current year's production does not always reflect the fertilizer application.

Dusting of peanuts has been demon-

strated to result in substantial yield increases. Further, it is a simple operation to carry out. Estimates indicate, for example, that only one percent of Georgia's peanut acreage was dusted in 1943. Yet an estimated 75 percent of the total acreage is affected with leaf spot diseases every year, suggesting the desirability of dusting. The treating of peanut seed for soil-borne diseases also offers an opportunity for substantial yield increases with little extra work and expense. Only about 10 percent of the peanut seed was treated in 1943.

There has been a tendency during the war for farmers to reduce the quantity of peanut seed planted per acre because of high seed costs. Experiments indicate conclusively that "skipping" on seed is extremely uneconomical, because lower yields are certain to result. Experiments also show that most farmers could profitably plant more peanut seed per acre than is their usual practice up to the point where further shortening of the distance between rows is prohibited by the size of the implement used for cultivation.

These are but a few of the great number of improved practices that could be followed immediately by a great many southeastern farmers with considerable profit to themselves.

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## **INCOME TAXES**

FARMERS this year have until January 15, 1945 to file with their Federal Collector of Internal Revenue declarations of estimated tax for 1944 income. Final returns are due by March 15, 1945. But if a farmer files his *final* return for 1944 by January 15, 1945 no other report is required.

# South Central Region

**WAR HAS** produced many changes in the agriculture of the South Central region,<sup>1</sup> but production goals and supporting programs for 1945 make no new demands on the region's farm resources. Adjustments for the year ahead represent, in the main, a continuation and refinement of those taking place during 1944.

## Labor

Many agricultural counties in the South Central region have lost 20 percent or more of their 1940 population to the Nation's war industries. The heaviest exodus of farm people appears to have been from areas where production methods involve large amounts of hand labor and where farming is least rewarding. In these areas, the largest of which is the Coastal Plains, a reduction in the labor force necessitates a direct curtailment of crops with heavy labor requirements such as peanuts, cotton, and truck. As there are few opportunities in these areas for shifting immediately to more extensive lines of production, many farms are partly idle and some have been completely vacated.

In contrast, the reduction in the labor force of the more commercialized farming areas, while somewhat less severe, has been offset in considerable part by increasing the output of the remaining workers through greater use of mechanical power and through adjustments in cropping systems which distribute the work load and make for more efficient use of labor.

Throughout the region, however, the use of available labor with maximum effectiveness remains a problem of paramount importance to farmers in making their production plans for 1945. Moreover, the solutions farmers find to this problem may well prove to be important steps toward improving their position after the war.

<sup>1</sup> Louisiana, Arkansas, Oklahoma, Texas.

For much of the region, cotton promises to continue as the principal enterprise around which farming systems are organized. At parity prices cotton provides a more attractive return per acre than any important crop alternative in the main cotton-producing areas. In general, farmers in these areas find it profitable to plant as large an acreage of cotton as is practicable with the labor force in prospect. And so the difficulties farmers are reported to have encountered in finding labor to handle the current cotton crop, however, suggest that they are not likely to risk planting an acreage much, if any, larger next year.

## Cotton

In the Delta, an area which is eminent in its advantages for cotton production, other crops seem assured of an important place in production plans for next year. In view of prospective returns, it will not be profitable to leave idle any cropland suitable for oats, corn, or soybeans—even though some planters may find it necessary to grow less cotton in order to make labor available for fully exploiting the possibilities of these crops. Similar problems are involved in choosing the most profitable combination of cotton with competing crops in other areas.

In the western cotton areas of Oklahoma and Texas, the introduction of sorghum varieties suitable for combine harvesting gives promise of making this crop almost as profitable as cotton. Moreover, substituting grain sorghums for cotton offers an advantage not readily expressed in dollars—that of alleviating the dependence on an unassured supply of migratory labor at harvesttime. But under prevailing price relationships, the lack of combines has been and promises to continue as the important limitation on the extent of this substitution.

The successful introduction of mechanical cotton harvesters (at estimated savings of about \$21 per bale over hand harvesting methods) suggests that as the use of this equipment becomes widespread, cotton will recover most of its former advantages over sorghums. While important advances in the mechanization of cotton production now appear assured in these western areas, and in the Delta as well, it seems improbable that these advances will be sufficient by 1945 to disturb competitive relationships to any important extent.

#### **Peanuts**

Although the war brought large increases in the acreage of peanuts in 1942 and 1943, the somewhat smaller acreage planted in 1944 probably represented better use of farm resources. In most of the commercial peanut areas the 1943 acreage was larger than could be continued within the limits of necessary crop rotations and in some cases larger than could be handled adequately by the labor force available. A reduced acreage in 1944 was a logical adjustment to these circumstances—circumstances which are not conducive to increased acreage in 1945.

Outside of the commercial areas there is a large acreage of land suitable for peanut production, but in these areas the outcome of farmers' efforts to produce peanuts in 1942 and 1943 was unsatisfactory, and many new growers dropped out in 1944. Reported as contributing to the poor outcome of attempts to produce peanuts in these new areas were: (1) the poor quality of planting seed available, (2) unfamiliarity with necessary production practices, (3) a shortage of harvesting machinery, and (4) inadequate marketing facilities. More than a few new growers have demonstrated that peanuts, when grown according to good practices, will give a larger return than cotton in most sandy areas of the region. But it is unlikely that farmers in these areas will attempt any

significant increase over this year's acreage without assurances, more specific than in the past, to protect their investment.

#### **Soybeans**

Soybeans, the only other oilseed crop the region produces in important quantities, are adapted only to the Delta and a few other alluvial areas of similar character. Here the acreage planted for beans has increased considerably over pre-war levels, but a large part has been lost each year. Better production methods, rather than further increases in the acreage planted, offer the main possibility of increased bean production in 1945—and these include adequate cultivation to keep down weed competition, insect control in the lower parts of the Delta, and timely harvesting.

#### **Wheat—Sorghums**

In the wheat-growing areas of the western part of the region, grain sorghums have challenged the status of wheat as the "first choice" crop. There are indications that on some soils often used for wheat production, grain sorghums will produce somewhat more grain per acre. However, in this area of erratic rainfall, the yield advantages of grain sorghum have not yet been demonstrated as being sufficient to warrant many wheat farmers passing up a fall season suitable for planting wheat. Improvements in varieties have, however, greatly enhanced the value of grain sorghums as a catch crop and as a supplemental enterprise on wheat farms.

When wheat acreage controls were in force, much of the nonwheat land was used for growing sorghums, a crop which ordinarily is not off the land until after time for fall seeding of wheat. Hence, as demands for wheat increased, farmers found it impossible to immediately divert sorghum acreage to wheat without sacrificing total grain production. Increasing the wheat acreage has necessarily involved careful forward planning over several

crop seasons. Prospects are good, however, for a near-record acreage of wheat for harvest in 1945.

### **Rice—Sugarcane**

The acreage of rice has increased by about one-third during the war. There has been an important acreage of land developed for rice production, but the larger part of the increased production is attributed to a shortening of rotations. Some growers have risked overplanting their available water supplies. However, prospective prices again offer a strong inducement to defer the resumption of longer rotations, and farmers have learned that declining fertility can be offset, in part at least, by use of fertilizer. Moreover, the rapidly expanding use of combine harvesters offers hope of lessening labor difficulties at harvest time. Hence, the main consideration pointing toward a slight reduction in rice acreage next year is that of employing more prudent policies in the use of water.

Sugarcane production in Louisiana is closely related to the crushing capacity of sugar mills. A large crop can be handled only by extending the harvest into late winter, which entails a proportionately increased risk of freeze damage and loss by growers. With average yields, a cane crop of about 290,000 acres, including seed cane, is considered the optimum size. Although high production costs have lessened the incentive for assuming the risks of a larger crop, the possibilities of reducing production costs which are offered by the mechanical harvester and flame cultivator give encouragement to the attainment of an optimum acreage in 1945.

### **Livestock**

In considering prospective livestock adjustments, the preponderance of land in the region available for grazing demands that forage consuming livestock should be given preference over those dependent on concentrate feeds. However, most farmers have already

found it necessary to align grain consuming livestock enterprises with a short and high priced feed grain supply. A notable adjustment has been the 33-percent drop in the number of sows expected to farrow this year as compared with 1943. Although prospective returns from selling grain for cash and from alternative enterprises appear favorable, the maintenance of or a slight increase in farrowings in 1945 seems desirable. A curtailment in poultry enterprises, particularly in laying flocks, also appears desirable if a repetition of the market gluts this year is to be avoided.

### **Range Conditions**

A series of years which have provided above-average range conditions in combination with high livestock prices have encouraged very large cattle and sheep inventories in the range areas. These inventories are excessive from the standpoint of stocking rates which will ordinarily leave a safe reserve. Although there has been some liquidation, further reductions in anticipation of less favorable pasture conditions appear inevitable—and it is in keeping with good ranch management to make this adjustment while markets will absorb the excess at favorable prices. Compared with cattle, sheep are in relatively the least favorable competitive position and the downward adjustment in numbers which started in 1943 has continued. It therefore appears that relatively the heaviest reduction might be made in sheep numbers in 1945.

Offsetting the reduction in the cattle population of the range areas, have been increases in both dairying and in beef production in the more humid eastern part of the region where these enterprises, along with feed and pasture crops, have been expanded at the expense of labor-intensive crops. Giving impetus to this adjustment has been the introduction of better varieties of small grains, particularly oats.

There has been a rapid shift toward replacing corn with winter oats—a crop which can be followed by legumes for hay and which furnishes valuable winter pasture. Further adjustments in this direction are in prospect for 1945, making additional feed and pasture available which can be profitably utilized for dairy and beef production.

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## FOOD

**T**OTAL civilian food supply in 1944 was at least 7 percent above the average of the five pre-war years, 1935–39.

For 1944 as a whole, civilian supplies of most of the manufactured dairy products, canned fruits and vegetables, better grades of beef, and turkeys were short of civilian demand at ceiling prices. But cereal products, lard, margarine, eggs, pork, canned fruit juices, and the principal fresh fruits, particularly citrus, were available to civilians in relatively large quantities. Even though sales of fluid milk and cream were somewhat restricted, their consumption reached a new high, very important in meeting civilian nutritive needs.

Civilian meat supplies, particularly pork, were very large until summer. Since then, they have been reduced considerably by seasonal decreases in production during the summer and by markedly increasing war requirements, for the last quarter. However, meat consumption for the year as a whole will probably be from 140 to 145 pounds per capita, compared with the 126-pound average in 1935–39.

About 347 eggs per capita were consumed in 1944, a trifle more than last year, but chicken consumption fell off because of the larger supply of other meats and heavy noncivilian requirements. Turkey supplies for

civilians for the year as a whole were as large as last year, but noncivilian takings were particularly great this fall.

Fluid milk consumption reached a new high this year, but less condensed and evaporated milk was available for civilian consumption. Civilian butter supplies per capita for the year approximated those of last year, about 12 pounds, over 25 percent below the pre-war rate. Lard consumption was below the 1943 level although supplies were generally adequate to meet civilian food demand at ceiling prices.

Civilian fruit and vegetable supplies in 1944 were about the same in total as in an average pre-war year (1935–39), with large supplies of fresh vegetables and fruits and canned fruit juices but short supplies of other commercially canned goods, because of heavy war requirements. Supplies from Victory Gardens supplemented commercial production. Potato consumption was a little below pre-war levels because of the short 1944 crop and large noncivilian takings. Cereal products were generally plentiful in 1944.

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*Statements from the Department of Agriculture Interbureau Committee on Post-war Programs.* Submitted to the House Special Committee on Economic Policy and Planning, August 23, 1944. Processed. 45 pp. Bureau of Agricultural Economics. Washington. August 1944.

Contains statements on post-war programs for agriculture as they relate to employment, farm technology, marketing, price policies, forest conservation, soil and water conservation, rural electrification, housing and health, social security, and farming opportunities for veterans.

*Let's Talk About When Joe Comes Home and Comes Back to the Farm.* DS 24. 6-page folder. Printed. Bureau of Agricultural Economics. Washington. September 1944.

Discusses what the community and the individual can do to help the men and women discharged from the armed services.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities, interest, and taxes		Dairy products	Poultry and eggs	Meat animals	All live-stock
1934.....	75	76	109	122	129	95	101	89	70	84
1935.....	87	86	117	125	130	103	114	116	116	115
1936.....	103	100	118	124	127	111	125	114	118	120
1937.....	113	117	126	131	133	126	130	110	132	127
1938.....	89	91	115	123	126	125	114	108	115	113
1939.....	109	105	113	121	124	123	110	95	112	108
1940.....	125	119	115	122	125	126	119	96	111	112
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	238	144	152	150	201	162	151	188	173
1943.....	239	305	161	167	162	264	193	190	209	200
November.....	247	318	160	171	166	-----	202	219	193	201
December.....	241	316	151	173	167	-----	203	212	194	200
1944-January.....	243	319	151	174	168	275	201	177	194	193
February.....	244	321	151	175	169	-----	201	168	199	194
March.....	241	318	152	175	169	-----	199	162	203	194
April.....	239	313	152	175	169	292	196	151	203	191
May.....	237	313	152	175	169	-----	194	153	201	190
June.....	235	313	152	176	170	-----	192	154	200	189
July.....	231	306	152	176	170	328	194	165	197	190
August.....	232	310	152	176	170	-----	196	171	201	194
September.....	231	307	152	176	170	-----	198	179	200	196
October.....	230	-----	152	176	170	325	201	190	201	199
November.....	-----	-----	-----	177	171	-----	203	207	200	202

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio <sup>4</sup>
	Crops									
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934.....	91	95	159	97	95	88	95	98	90	70
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	108	102	165	95	112	92	104	107	114	90
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	176	67	88	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	96	73	111	88	100	80
1941.....	97	89	159	107	130	85	129	100	124	91
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	160	190	179	245	183	192	119
November.....	160	158	347	156	202	196	224	187	194	117
December.....	166	165	349	160	202	208	223	192	196	117
1944-January.....	170	168	350	162	203	204	267	199	196	117
February.....	170	169	348	161	205	206	247	196	195	116
March.....	169	171	351	161	207	215	242	198	196	116
April.....	171	172	352	163	207	237	220	200	196	116
May.....	170	173	350	160	208	232	225	198	191	115
June.....	165	170	350	163	210	228	231	197	193	114
July.....	161	168	350	164	209	230	195	194	192	113
August.....	166	166	355	162	209	214	186	191	193	114
September.....	155	162	358	170	207	206	166	188	192	113
October.....	164	161	357	171	211	205	153	187	194	114
November.....	165	157	368	168	215	165	188	189	196	115

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics

<sup>4</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION • JANUARY 1945

## *A Brief Summary of Economic Conditions*

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THE RETURN to rationing of virtually all of the foods removed from the ration lists last summer further points the need for top agricultural production in 1945. As insurance against probable lower yields, acreage goals this year call for a 5.3 million acre increase in cultivated crops over the 1944 acreage plus a 3.3 million acre increase in tame hay to make possible a production approaching last year's all-time record. Livestock goals for 1945 call for an increase in milk production, number of pigs farrowed and cattle and calf slaughter, but no increase in hen numbers. \* \* \* The \$18.00 over-all ceiling on live cattle and calves, Chicago basis, until July 2 (\$17.50 thereafter) will tend to keep all live cattle prices in the first half of 1945 about the same as a year earlier, larger-than-usual marketings before mid-1945, discourage feeding cattle to prime and choice grades, weaken the demand for feeders, and hold down beef prices despite the general meat scarcity. \* \* \* To meet military requirements, 20 percent of the February creamery butter output and 25 percent of the March output must be set aside for Government purchase. \* \* \* In December, prices received by farmers were at the highest level since September 1920, the over-all farm price index being 200 percent of the 1909-14 parity base and 4 points above a year earlier.

# Commodity Reviews

## WHEAT AND RYE

**T**HE acreage of winter wheat seeded in the fall of 1944 is estimated at 49.6 million acres, an increase of 7 percent above the 46.4 million acres seeded in the fall of 1943. This is nearly 5 percent above the 10-year (1933-42) average and is the largest acreage sown since the fall of 1937.

On the basis of such factors as crop condition and weather during November together with yields in past years, the indicated winter wheat production is 761.6 million bushels. This is close to the 764.1 million bushels produced in 1944 which was the second largest winter wheat crop on record.

The acreage of rye sown for all purposes this past fall is estimated at 4.7 million acres, about the same as in the fall of 1943, but about a fourth less than the 10-year average.

Important changes in the distribution of rye acreage among the States has taken place in the past few years. Based on the 1932-41 average, North Dakota, South Dakota, Nebraska, and Minnesota had half of the country's rye acreage, but this season the acreage in these States accounted for only 29 percent of the National total. Oklahoma and Indiana, along with Nebraska and South Dakota, now are the four leading States.

## PIG CROP

**H**OG production in 1944 dropped sharply from the all-time peak reached in 1943 and a continuation of the decline is in prospect during 1945 but at a lower rate. The 1944 fall pig crop of 31,325,000 head was down 34 percent from the fall of 1943. When added to the spring pig crop of 55,428,000, which was down 25 percent, the total 1944 pig crop of 86,753,000 was 29 percent below the 1943 crop of 121,706,000 head.

The indicated number of sows to farrow in the spring season of 1945 is

7 percent below the number farrowed in the spring of 1944. The number of hogs over 6 months old on December 1 was sharply below the record number a year earlier.

## FOOD

**P**ROSPECTIVE supplies of various foods for the first quarter of 1945 are different from those available to civilians in the same period of 1944. Reductions in the supplies of meat, poultry, butter, evaporated milk, potatoes, fresh vegetables, and perhaps lard will not be entirely compensated for by the expected increases in fluid milk, American cheese, and fruits other than citrus. Citrus supplies will be about the same as last year.

In comparison with the pre-war period (1935-39), it appears that as much meat, lard, and fresh vegetables will be available but potatoes and butter supplies, particularly butter, will be below average.

Despite these reductions, civilians will not be faced with any over-all food shortage during the next few months. Supplies of fluid whole milk, non-fat dairy products including cottage cheese, buttermilk, chocolate milk and dry solids, eggs, fish, margarine, cereal products, dry beans and peas, and citrus fruits will make possible a level of food consumption at least as high as the pre-war level, although different in composition.

During 1944 civilians were eating meat at the annual rate of 140 to 145 pounds per capita, 15 to 20 pounds above the 1935-39 average. Total meat supplies in January, February and March will be smaller than either the first or fourth quarter of 1944 because stocks are low and meat production is expected to be 10 to 12 percent less than in either of those quarters. Along with smaller total supplies, war requirements will be larger so civilian supplies of meat may not be much above the 1935-39

average. Civilian pork supplies will continue at the rate of the last few months, which is below the very large quantities available during the past 2 years.

## FARM LABOR

**D**ESPITE a total farm labor force 2 percent below last year and about 10 percent below the 1935-39 average, agricultural production in 1944 was an all-time record, with no serious loss in production attributable to labor shortages.

This remarkable record by farm operators and other farm workers was achieved by working more hours per day and more days per week than ever before, more efficient utilization of labor, and lengthening the harvest period for most crops. Also, more machinery was available in 1944 than the year before.

Output per farm worker in 1944 was about 70 percent more than in the last war and substantially above peace-

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
<b>1943</b>			
January.....	181	156	116
February.....	184	158	116
March.....	192	159	121
April.....	197	160	123
May.....	194	162	120
June.....	195	163	120
July.....	193	164	118
August.....	192	164	117
September.....	193	164	118
October.....	194	165	118
November.....	194	166	117
December.....	196	167	117
<b>1944</b>			
January.....	196	168	117
February.....	195	169	115
March.....	196	169	116
April.....	195	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117

<sup>1</sup> Ratio of prices received by farmers to price paid, interest, and taxes.

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State

	5-year average		December 15, 1943	November 15, 1944	December 15, 1944	Parity price December 15, 1944
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.43	1.43	1.45	1.51
Corn (bushel).....do....	.642	.691	1.11	1.06	1.06	1.10
Oats (bushel).....do....	.399	.340	.709	.662	.694	.682
Rice (bushel).....do....	.813	.742	1.88	1.74	1.75	1.39
Cotton (pound).....cents..	12.4	10.34	19.85	20.78	20.85	21.20
Potatoes (bushel).....dollars..	.697	.717	1.35	1.43	1.50	1.24
Hay (ton).....do....	11.87	8.87	15.20	15.60	16.50	20.30
Soybeans (bushel).....do....	1.96	.954	1.81	2.05	2.05	1.64
Peanuts (pound).....cents..	4.8	3.55	7.10	8.08	8.15	8.21
Apples (bushel).....dollars..	.96	.90	2.04	2.10	2.33	1.64
Oranges, on tree, per box.....do....	1.81	1.11	2.24	2.07	2.23	2.01
Hogs (hundredweight).....do....	7.27	8.38	12.50	13.50	13.40	12.40
Beef cattle (hundredweight).....do....	5.42	6.56	10.90	11.80	11.50	9.27
Veal calves (hundredweight).....do....	6.75	7.80	12.50	12.90	12.90	11.60
Lambs (hundredweight).....do....	5.88	7.79	12.10	12.20	12.40	10.10
Butterfat (pound).....cents..	26.3	29.1	51.0	50.7	51.0	49.3
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.39	3.39	3.39	3.00
Chickens (pound).....cents..	11.4	14.9	24.4	24.0	24.1	19.5
Eggs (dozen).....do....	21.5	21.7	44.9	43.4	44.5	44.2
Wool (pound).....do....	18.3	23.8	140.1	40.4	40.4	31.3

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

time levels. For example, the 100,000 foreign laborers who worked on farms last year were kept employed about 90 percent of the time compared with migrant workers in peacetime who usually worked only about half the time. Also, a greater percentage of family workers was kept employed more of the time than in any recent year.

## FRUIT

WITH marketings of citrus fruit nearing the seasonal peak, prospects for the rest of the 1944-45 season look good from both the producer and consumer standpoint. Florida citrus production has largely recovered from the hurricane damage last fall and shipments from Texas are making up for lowered shipments from Florida so that consumers are not expected to have difficulty in obtaining citrus fruit.

Although citrus prices are high and the demand is good, they are below ceiling levels.

Total orange production this season is now expected to be about the same as last season's record crop. Grapefruit production will be down about 10 percent from last season, but lemon output will be about a fifth larger.

## 1945 Agricultural Goals

WITH the largest military food requirements in history quite probable, with foreign relief food needs increasing and with civilian demand continuing at record high levels, agricultural production in 1945 will have to meet one of the greatest needs yet known for the food and fiber output of American farms. In short, agricultural production this year will have to nearly equal the all-time record of 1944.

For six successive years farmers have topped the previous year's production records, with 1944 output a third more than the average for the five pre-war years of 1935-39. In making plans for 1945 some farmers would like to ease up and drop back

## POULTRY AND EGGS

A DECEMBER egg production of 282 million dozen, 4 percent above a year earlier and a record for that month, brought the 1944 output to 4.8 billion dozen, an all-time record and 6 percent above the previous record in 1943. The 4 percent fewer layers on farms last December was more than offset by an 8 percent increase in rate of lay over a year earlier.

The apparent record civilian consumption of shell and frozen eggs kept December wholesale prices of all grades at or near ceiling levels. Storage stocks have been further depleted because currently produced eggs are not enough to meet the strong demand.

The 1945 egg price-support program is designed to assure producers a minimum of 24 cents for straight-run eggs and 27 cents for candled eggs. The method of reflecting these prices to individual producers is similar to that in effect in 1944.

To further meet military needs War Food Order 119, restricting the sale of live or processed poultry in the Del-Mar-Va and West Virginia areas, was recently extended to Georgia, Arkansas, Missouri and Oklahoma.

to pre-war levels. Crop systems are getting out of balance in some areas. The physical job of producing a third more with 10 percent fewer people on farms is a tremendous undertaking. Many farmers are under great strain. But the time for relaxing is not yet here. The year 1945 will not be the time for cutting down.

The 1945 goals call for 364 million acres of cultivated crops and hay—300 million acres of crops and 64 million acres of hay. This is somewhat more than the 1944 acreage of 355 million acres—295 million in crops and 60 million in tame hay.

Livestock goals call for a slight increase in number of pigs farrowed, in milk production and in cattle

slaughter, but no increase in present hen numbers.

### Considerations in Developing Goals

The first consideration in developing 1945 goals was to determine as far as possible what the requirements would probably be. This involved an appraisal of the food needs of our armed forces and our allies, of our own civilian requirements, of commercial export demand, and of foreign relief needs. Any prospective drop later in the year in the 25 percent of our production now going to the armed forces and allies must be balanced against possible increased foreign relief needs, a continued strong civilian demand for food, a probable lower yield this year, and the advisability of beginning to build back some of the soil resources drawn on during these years of record output. The 1945 goals, assuming average growing conditions, are planned to meet these requirements and so call for another year of full production.

The second consideration was to arrive at as balanced a pattern of production as possible—to balance requirements with resources. Through discussions with State and local agricultural leaders it was determined what American farms can produce—what a feasible 1945 wartime capacity is.

The third consideration was an appraisal of prospective labor, equipment, machinery, supplies, prices and similar essentials of the 1945 production program.

### Goals Chart the Course

Establishing goals is a method of translating requirements for food and fiber into terms that can serve as guides to farmers in planning their individual production programs. The goals are not ends in themselves. They are only the beginning of the production program. They point the direction and distance the production program must travel in order to meet expected needs.

Here, then, are brief comments on

the goals for some of the more important commodities for use by farmers in charting their own production programs. In some instances the 1945 goals call for substantial increases over 1944 output, in others the goals ask about the same as was produced last year, while in still others the goals call for less.

### Higher Goals

Commodities which have goals asking for increases over 1944 production follow.

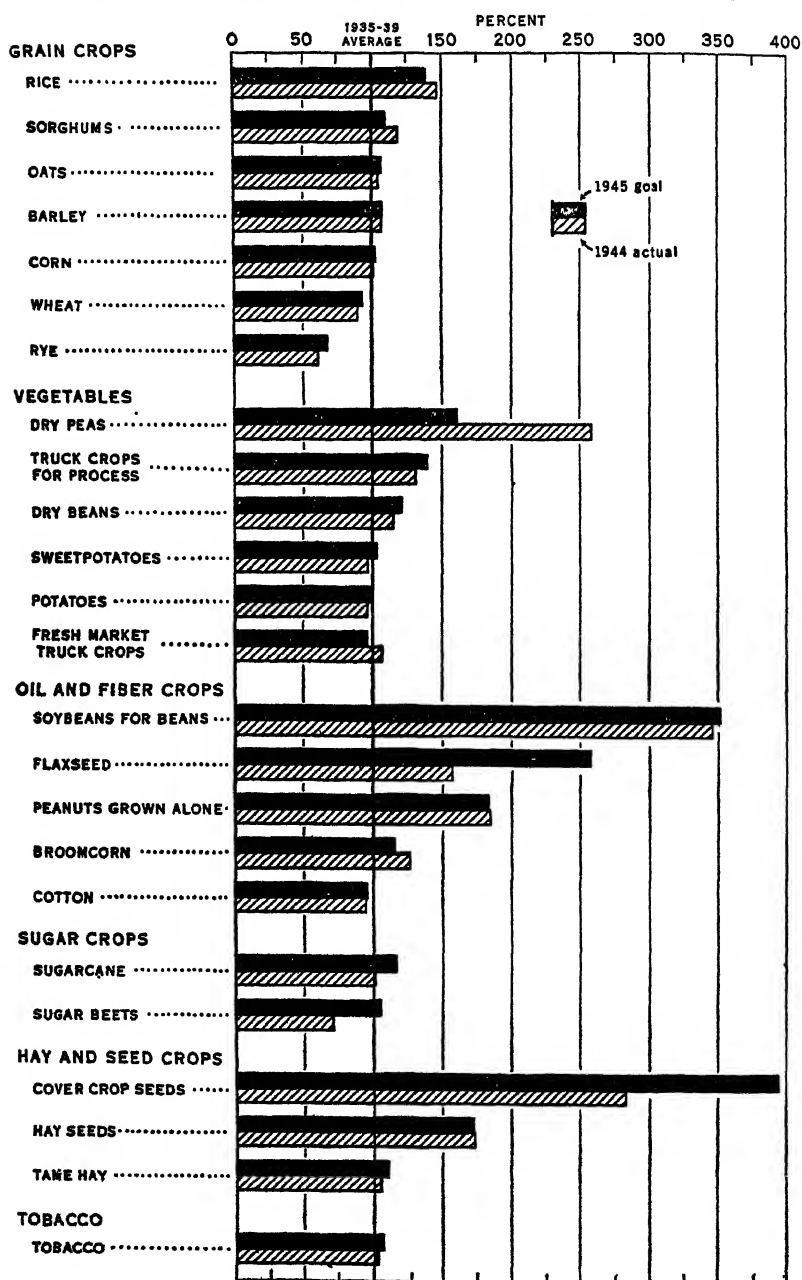
**Flaxseed.**—The flaxseed planted acreage goal is  $1\frac{1}{2}$  times that planted in 1944 and  $3\frac{1}{2}$  times the 1935–39 average. Strong demand for linseed oil for direct war purposes will continue and an equally strong demand is expected as soon as the progress of the war permits a resumption of industrial and residential construction. Prospects for large imports of flaxseed are not very promising at present.

**Sugar beets.**—The 1945 goal is nearly  $1\frac{1}{2}$  times the 1944 acreage and 7 percent above the 1935–39 average. Increased production of sugar beets offers the quickest means of alleviating the sugar shortage. But the labor factor will continue to be important in meeting the 1945 goal.

**Tobacco.**—The supply of practically all types of tobacco will continue relatively tight after the harvest of the 1945 crop. During the war, domestic consumption and exports for most types of tobacco have exceeded production and stocks have been reduced. Consequently the goal for tobacco has been increased. Greatest increases are for Maryland, fire-cured, and cigar binder and wrapper types.

**Legume hay seeds.**—Most legume hay seeds are in short supply. Their production should be increased for the time when larger quantities of these seeds will be needed to return cultivated land to hay and pasture. The goal is nearly 10 percent above the 1944 acreage and  $1\frac{1}{4}$  times the 1935–39 average.

# **WARTIME INCREASES IN UNITED STATES CROP ACREAGE** **1945 GOALS AND 1944 ACTUAL AS PERCENTAGE OF 1935-39 AVERAGE**



**Winter cover crop seeds.**—These seeds also are needed for soil conservation purposes. The goal is a third more than the 1944 acreage and nearly four times the 1935-39 average.

**Hay and forage.**—An increase of approximately 5 percent over that of 1944 is asked for tame hay acreage. This will provide more feed and at the same time permit a larger acreage to be planted in soil-protecting sod crops.

**Hogs.**—A small increase in the number of spring pigs is recommended. Civilian supply of pork in 1945 will be short of demand. The improved feed situation warrants an increase in hog numbers.

**Milk.**—The 1945 goal of 120 billion pounds of milk produced on farms is about 2 percent above 1944 output and 16 percent above the 1935-39 average. Disappearance of milk and milk products in 1944 expected to be the equivalent of about 121 billion pounds of milk production. To meet requirements in 1944, current produc-

tion was supplemented by the equivalent of nearly 3 billion pounds from stocks. Even with attainment of the 120-billion-pound goal in 1945 there would be slightly less for total consumption in 1945 than was actually consumed in 1944.

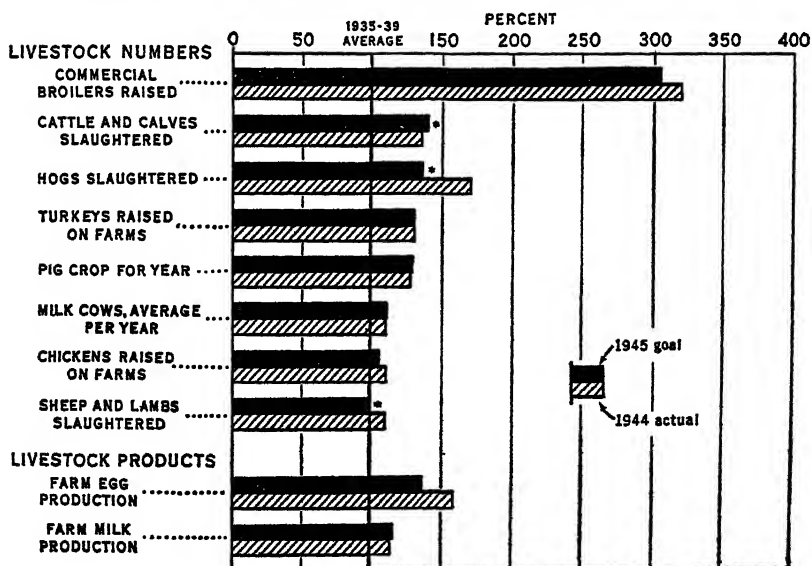
**Beef cattle.**—The 1945 goal calls for a reduction of almost 3 million head in the number of cattle on farms during 1945 through increased slaughter. A lower hog slaughter increases the need for more beef. Numbers of cattle also should be reduced since many areas are overstocked from a range and feed-stocks standpoint.

### Same Goals

Commodities which should be maintained at 1944 levels follow.

**Oil crops.**—The demand for edible oils will continue very strong. Soybean and peanut acreages are maintained at 1944 levels because these represent about the maximum feasible production.

**WARTIME INCREASES IN UNITED STATES LIVESTOCK NUMBERS**  
1945 GOALS AND 1944 ACTUAL AS PERCENTAGE OF 1935-39 AVERAGE



\*ESTIMATED NUMBER SLAUGHTERED IF LIVESTOCK POPULATION GOAL IS ATTAINED



**Feed grains.**—The use of reserve grain supplies has been largely responsible for increasing the volume of livestock and livestock products marketed in 1943 and 1944. These reserves have now been used up and adjustments in livestock have taken place. Feed grain goals are maintained at the 1944 acreage to permit some stock-piling again.

**Wheat.**—The wheat goal is 1 percent over the 1944 planted acreage but 8 percent less than the 1935-39 average.

Goals for cotton, broomcorn, potatoes, sweetpotatoes, and dry beans call for acreages the same as in 1944.

#### Smaller Goals

Commodities with goals below 1944 levels follow.

**Dry peas.**—To supplement the supply of dry beans, large acreages of dry peas have been needed in the past few years. The response of pea growers to these high goals has been

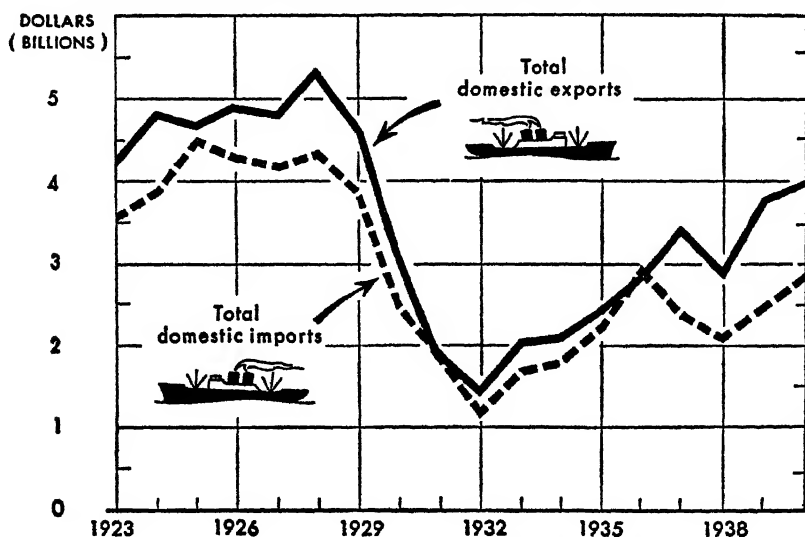
splendid. Consumers, however, have reflected a preference for dry beans which has resulted in an accumulation of dry pea stocks. Therefore, the dry pea acreage goal for 1945 is about 40 percent below the 1944 planted acreage, although more than 60 percent above the 1937-41 average.

**Fresh vegetables.**—A reduction of about 10 percent in the acreage of fresh vegetables from commercial truck crop areas is asked. Considerable expansion of certain vegetables took place this past season, resulting in a waste of food and production resources. The goal acreage should bring about a production adequate to meet all needs, without waste.

**Poultry and eggs.**—Maintenance of present laying flock numbers is recommended. This should result in a 1945 total egg production slightly lower than in 1944.

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War Food Administration

### IMPORTS AND EXPORTS RISE AND FALL TOGETHER



# The General Food Situation

**F**OOD production has risen steadily through the war period, reaching a level 36 percent above the pre-war (1935-39) level in 1944 and averaging 24 percent higher for the 5 years 1940-44. At the same time, military, lend-lease, and export requirements made increasing demands on our output. In 1944 the total volume of these requirements is now estimated to be equivalent to about 23 percent of the volume of food production for sale and for farm home consumption.

Even with this huge claim against domestic food production, supplies remaining for civilians have been large enough to permit an increase in the average per capita consumption of food, in 1944 at least 7 percent above the pre-war average of 1935-39. The per capita consumption of most of the food groups was above the 1935-39 average in 1944. Those below the 1935-39 average include canned fruits, fats and oils (including butter), cheese, and sugar.

## Outlook for 1945

Virtually all available food will be needed during 1945. As long as the war in Europe continues noncivilian demands will continue at present high levels, and though there will be downward adjustments following the end of the war in Europe, such adjustments probably will be largely offset by requirements for foreign rehabilitation and by civilian demand in this country, which, for many foods, continues to exceed supplies, even at ceiling prices. This is not to say that a number of agricultural commodities may not become problems this year.

This general statement<sup>1</sup> is based upon certain assumptions; that the German phase of the war will end by the middle of 1945 and that the war

with Japan will continue throughout the entire year. As to the domestic economy, it is assumed that, as a result of cutbacks following the end of the German war, national income in 1945 will average around 140 billion dollars compared with a level of about 157 billion in 1944, but that consumer expenditures for food will not drop proportionately. Rough allowances have been made for decreases in military and lend-lease takings and increases in food requirements for foreign rehabilitation.

## Transition Cross-Currents

Despite large needs and strong demand for foods generally in 1945, difficult transition problems lie ahead. This will be true particularly of the period after the final military effort in the Far East. Although one cannot attach any definite dates to the transition period, it is considered here as developing during 1946 and could possibly begin as early as the latter part of 1945.

The transition period generally is almost certain to be a mixture of economic cross-currents rather than a well-defined movement. Some parts of the economy will be expanding,

Here are some provocative observations on food consumption in the years ahead. The first article is by one of the leading authorities on food consumption in the Department of Agriculture. It is followed by a brief article by a food authority in the Federal agency dealing with food shipments to allied countries and discusses some of the points raised in the first article. Both articles are digests of talks given at the outlook conference held in Washington last November.

<sup>1</sup> The 1945 outlook for specific food groups, discussed in some detail in the original version of this report, is not included here because the subject is summarized elsewhere in this issue as well as in other recent issues.

others contracting. Some prices will be rising, particularly among the non-agricultural products, others falling. Surpluses and shortages will co-exist. The forces of both inflation and deflation will be present.

On the whole this is to be a period of price recession for farm products. This recession will occur even if we get through the transition period without serious unemployment and if foreign demands are above pre-war levels, as the current level of prices received by farmers is higher than would be expected even under unprecedented levels of peacetime prosperity. This recession is not likely to be uniform among the various commodity groups. Some foods, particularly the fats, will still be short in the international markets, whereas others, such as wheat, will quickly become relatively abundant. Price dispersions among the commodity groups are likely to be much more marked than is usually the case when prices are falling.

### **Prices One-Fifth Lower**

The degree of the price decline will, of course, depend on whether the transition is effected smoothly at high levels or whether it involves a considerable slump. If we can get through this period with a national income of around 125 billion dollars and agricultural exports of around a billion to a billion and a half dollars, prices might not break much more than about 20 percent below current levels even with a food production about 25 percent above pre-war.

A situation such as this would be accompanied by a reduction in farm income, but would not be critical. Prices and income would still be high relative to the pre-war period, and there would be little difficulty in disposing of the food production. If we should drop much below this level, however, the combination of low consumer demand in this country, and support prices higher than the normal market level, would lead us rapidly

into a surplus situation with very low prices for many farm products.

The food situation following the end of the German phase of the war will be complicated by the existence of Government-held food stocks. These stocks will include those held by the War Food Administration in this country, those in the hands of our military forces, food reserves established in the British Isles, and miscellaneous Government stock piles in various parts of the world.

Disposal of these stocks of food will be a difficult administrative problem. This will be particularly true for items packed or processed to meet particular war needs, and if food prices should decline to very low levels, disposal problems will be accentuated. But the importance of the stocks problem can be over-emphasized. For one thing, the stocks may be materially reduced in the course of the next year. War Food Administration stocks, which have been running between 1½ and 2 million tons, will have to be considerably reduced if the anticipated requirements for 1945 are to be met.

### **British Stocks Problem Secondary**

The British stocks are several times those usually carried in peace-time, but, with the end of the German war, an easing of food rationing in Great Britain probably can be expected. This might result in reduction of these stocks, particularly if shipping remains tight during the period of the Pacific War. But even if these stocks are as large a year from now as they are today, the stocks situation will be a secondary rather than a primary problem.

The primary problems are the maintenance of a high level of economic activity in the country and effective arrangements for the meeting of food needs in liberated areas. Given these, the problem of Government stocks will mainly disappear. Failing these, we will have a serious surplus problem, Government stocks or not.

The food situation in Europe obviously has an important bearing on

post-war demands for agricultural products from the United States and deserves a much fuller discussion than can be given here. In general, it appears that the total production of food in Continental Europe has been maintained close to the pre-war level in terms of calories. But the per capita consumption in Europe is evidently considerably below pre-war levels, in terms of both quantity and quality. The supplies of food furnished by pre-war imports are no longer available, population has increased, and there has been a shift from livestock products to products of vegetable origin, and from feed to food uses.

### **Russian Supplies Tight**

The food situation in Russia appears to be even tighter than in most of the other European countries. Very large imports of food would be required to restore the normal pattern of consumption and to offset nutritional deficiencies. But the demand implicit in these needs will be considerably tempered by other considerations, including the need of foreign countries for alternative commodities, such as clothing and capital equipment, and the general problem of financial arrangements involving the ability and willingness of importing countries to purchase food products from abroad and the terms on which the exporting nations will be willing to provide food. The supply of shipping will also be a major consideration as long as the Pacific war continues.

Although earlier popular ideas need to be revised about the volume of post-war food exports to Europe, such exports should be a real factor in maintaining the world demand for agricultural products materially above pre-war levels for at least a year after the end of the German phase of the war. The demand for fats will be particularly marked and will be reflected in the United States market. The demands for grain will also be large but countries other than the United States are likely to be the

largest beneficiaries of such demand. Continental Europe will also badly need other food items such as animal proteins after the war. However, the extent that such demand will be directed to the United States will depend on some of the factors previously mentioned.

### **U. S. Post-War Food Output**

Whatever may be the exact course of food production, consumption, and prices during the war and immediate transition period, the basic long-range problem is the extent of our ability or inability to utilize in the post-war period a volume of food production some 25 percent above the pre-war level. This fundamental problem will be with us whether the next year or so is a boom, a slump, or something in between. However, if we can obtain approximately full employment in this country in the post-war period, a food production near wartime levels will be necessary. The figures that follow are rather rough approximations. It is hoped that within a very short time workers in the field of food consumption will be able to provide more accurate answers. By 1946, for example, population will be about 9 percent higher than in 1935-39, which would require a food production that much higher even if our food production per capita were no better than in the pre-war period. By 1950, this increase will be about 11 percent.

The consumption of food is relatively stable compared to many other commodities, but it does have an income elasticity significant for agricultural production. This has been clearly demonstrated during the war when, despite food shortages that required rationing, per capita consumption of food has averaged around 7 percent above the pre-war level. Under conditions approximating full employment, such evidence as we have been able to assemble indicates that the per capita consumption of food might be as much as 15 percent above the pre-war level.

If we have full employment in the year 1946, for example, this increase in per capita consumption, together with the increase in population, would require a total food production just about 25 percent above the pre-war level, and this does not take account of a possible additional 3 to 5 percent for exports. In 1950, the food production requirement under full employment would be about 30 percent above the 1935-39 level. However, any increase in average per capita consumption would not be uniform for all commodities. The effect of income would be most pronounced on such items as meats, dairy products, fats and oils, and the fresh and canned fruits and vegetables. On the other hand, the consumption of grain products, potatoes, and sweetpotatoes probably would be lower than the pre-war average consumption. Even with an increase in food consumption, important shifts in agricultural production would be necessary.

Such calculations do not indicate that a diet of this level would, on the average, be much more than is generally considered adequate, and the possibility of a high level of consumption is indicated by the fact that under conditions of full employment, a large proportion of the labor force would be engaged in active work. This estimate does not involve additional food that might be distributed to nutritionally deficient groups, nor does it take into account an export level of food greatly above that of 1935-39.

#### **Full Employment Necessary**

Essentially, this type of analysis points to the absolute necessity of high levels of employment in the United States after the war if the problems of agriculture are going to be even approximately met. Failing such a high level, we shall have chronic agricultural surpluses and such programs as may be devised can be little more than palliatives. It is possible, perhaps, that even with something approximating full employment, there would still be surplus problems, if the

advance in agricultural technology continues. But our ability to cope with them will be greatly increased if we can have a high level of domestic demand to start with.

J. P. CAVIN

*Bureau of Agricultural Economics*

## **DISCUSSION**

AS MR. CAVIN says, the importance of the problem of stocks can be overemphasized, this problem is secondary, and the primary problems in the longer run are maintenance of a high level of economic activity and effective arrangements for meeting the food needs of liberated areas.

Here are some questions about Mr. Cavin's views. For example, he assumes that national income in 1945 will be perhaps about \$20 billion less than in 1944, but that consumer expenditures for food will not drop proportionally. What will people do with family budgets when they are able to spend more freely for other things than food, as they may perhaps be able to do in the latter part of 1945—for furniture, housing, automobiles, gasoline, heavy kitchen equipment, and so on? Will they begin to shift emphasis away from food to other things? I don't know, but the question needs to be asked.

Mr. Cavin feels that civilian per capita meat consumption may average 5 to 10 pounds lower than in 1944. So it may. But it may conceivably fall a good deal lower than that. Where it falls depends heavily upon what is done in the allocation process and towards meeting international obligations by restrictive consumer rationing or larger set-asides. Foreign countries want more of our meat than they are getting. If they are permitted to have it, or a substantial fraction of what they want and need, our own per capita consumption must fall by more than 5 to 10 pounds. If they are not permitted to have it, some embarrassing moments in international relations may arise.

What happens to several groups of commodities, depends heavily upon legislative and administrative action in the United States. The extent of demand for food for export is going to depend in large degree upon the funds Congress appropriates for Lend-Lease, for UNRRA, or for surplus disposal. This vast question remains to be threshed out; the answer isn't known now. Given the financing, the volume of exports will tend to maintain prices, but with meager financing the picture would look different. At the same time, allocations to foreign countries depend for their volume partly upon the finance made available to lift the stuff, and upon the liftings will partly depend the levels of per capita consumption among civilians. It remains to be seen how far allocation policy by itself will squeeze domestic consumers for the benefit of foreigners. How the inter-related matters of export financing, allocation, and domestic rationing will work out in coming months is difficult to foresee.

Finally, Mr. Cavin advances the view that, with full employment, *per capita* consumption of food would be not less than 15 percent above the pre-war level. If he means the physical ingestion of food measured in calories, I doubt it. Large popula-

tions, once they have attained a high average plane of living as our population has, move from depression to boom without a clearly measurable change in per capita caloric ingestion. But if supplies for consumption include all kinds of waste, he may be right, though even an advance to 15 percent above pre-war is a high expectation, because waste was pretty large in pre-war years. Again, if he refers to poundage of food per capita rather than calories, there may be no reason to challenge his conclusion, because that increase could be had by a development which substituted, for example, more vegetables and fruit and milk of low caloric content per pound for cereals or fats or sugar of high caloric content per pound—the total weight of foods per capita might increase while the calorie supply per capita did not.

The whole subject of food-consumption behavior of large masses of people under varying conditions of employment and income is far from fully explored as yet. Mr. Cavin has contributed some useful thoughts on the subject; I hope he and others will press the inquiry further.

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## The Corn Belt

FARMERS in the Corn Belt<sup>1</sup> have established remarkable records in the production of crops and livestock during the war, with 1945 total agricultural production expected to again approach the record levels of 1942, 1943, and 1944. But because there is increasing evidence that peak production has been attained during the past three years, no *substantial* increases over these high levels can be looked for in 1945.

<sup>1</sup> Ohio, Indiana, Illinois, Iowa, Missouri.

The following reports on the Corn Belt, Lake States, Great Plains, and Western States complete the regional production round-up begun in the December issue of the *Agricultural Situation*. These field reports summarize some of the important production adjustment problems of 1944 and those in prospect for 1945.

This is not surprising since Corn Belt farmers have worked both their farms and themselves to the limit for the past three years in order to make the greatest possible contribution to the national supply of foods.

### Crop Acreage Changes

Looking ahead to 1945, about the same total acreage of cropland will be used for crops, including rotation pasture, in all of the five Corn Belt States, except in Missouri where further substantial expansion in the acreage in crops is possible. However, in all of these States, very significant adjustments among the major groups of crops can be expected.

The acreage of intertilled crops probably should not go higher, and a downward turn may occur in 1945. Rather substantial increases in the acreages of small grains in Iowa, Missouri, and Illinois may more than offset a decline anticipated in Indiana and Ohio where 1944 acreages of these crops exceeded those of 1943. Further decline in the sod crop acreage may be expected in Iowa and Indiana but the remainder of the Corn Belt, no doubt, will show a maintenance or an expansion in the acreage of sod crops. An upward trend in the acreage of rotation pasture may be expected throughout the Corn Belt. Tame hay acreage may continue to decline another year for lack of new seedings.

These broad cropping adjustments in 1945 are in keeping with the long-time shifts farmers are planning. It is generally agreed that during the reconversion period the Corn Belt farmer should substantially reduce the proportion of his cropland planted to intertilled crops (including soybeans) from the high wartime levels. Simultaneously, he should be expanding the acreage in sod crops and to a lesser extent close-growing crops.

### Feed Supplies

Feed supplies in the Corn Belt will continue at near record levels. Although farmers entered the 1944-45

feed year with the lowest carry-over stocks of feed grains in recent years, the feed situation is much better than a year ago and 1944 produced record or near record feed crops.

Farmers have sharply reduced hog and poultry numbers. Horse numbers continue to decline. There are fewer cattle and sheep on farms. Milk cow numbers are up only slightly. The total number of grain-consuming animal units on farms during the current feed year will be 10 to 15 percent under 1943-44. Thus, the feed grain supply per grain-consuming animal unit during the 1944-45 feed year will greatly exceed that of the past season.

### Corn versus Soybeans

It is not likely that the 1945 acreage of corn will be expanded beyond 1944, especially in the eastern Corn Belt. A high degree of competition for the use of land, labor, and equipment has developed between corn and soybeans. In some parts of the Corn Belt an increase in the acreage of either of these crops can be attained primarily at the expense of the other. National requirements for soybeans remain high for 1945. Although in many sections soybeans have little or no advantage over corn or may even be at a disadvantage, Corn Belt farmers will continue to meet their goals from year to year. The easing feed situation will help in meeting the 1945 goal for soybeans. As wartime requirements for soybeans decline, considerable acreage will be shifted back to corn, oats, or sod crops. But the acreage of soybeans no doubt will remain at levels substantially above pre-war acreages.

The 1945 acreage planted to oats may continue slightly below the 1937-41 average, but with a return to conservation farming some expansion will occur. In many sections of the Corn Belt, oats compete successfully with other feed grains. They are essential to the rotation as a combination feed and nurse crop on almost every farm.

Marked increases in the acreages of the minor feed grains—barley and

rye—should materialize in sections where these crops produce more feed or greater net returns per acre than other crops. In recent years the acreages of barley and rye have been considerably below their 1937-41 averages.

Wheat is grown as a feed crop in many sections of the Corn Belt. The very rapid expansion, from relatively low levels, should continue in those areas in which wheat produces more feed or food per acre than alternative crops.

Generally, the Corn Belt has ample supplies of the roughages and pasture. However, in 1944 tame hay production was somewhat lower in the eastern Corn Belt and as a result local shortages may become evident. But the Corn Belt has immense quantities of unutilized corn stalks and other low-quality roughages. Possibilities for increasing the acreage, yield, and quality of the various hay crops and the carrying capacity of the pastures are great in the long run.

Byproduct feeds probably will be available in about the same quantities in 1944-45 as in the past season. However, supplies relative to livestock numbers will be larger.

### **Meat Animals**

Production of hogs was cut drastically in 1944 from the extremely high levels of 1943 and 1942 largely in anticipation of acute feed shortages. But with a better-than-expected corn crop in 1944, some recovery in spring and fall hog production may likely occur in 1945 in the western Corn Belt. The eastern Corn Belt, where feed supplies will not be quite so ample due to midseason drought and where other stock, particularly milk cows, compete more successfully for the feed grains, may cut hog production slightly under 1944. In order to provide sufficient pork products, the Corn Belt should increase the 1945 spring pig crop somewhat above that of 1944.

The number of beef cattle and calves on farms probably will decline for a few years from the high point reached

January 1, 1944. This downward movement in numbers will result from an increase in slaughterings. Demand for beef probably will taper off if pay-rolls are reduced during and following reconversion.

Sheep and lamb numbers began to decline in 1943, particularly in the eastern Corn Belt, as a result of increased slaughtering of mature stock due to feed and labor scarcities. Further declines are likely since other livestock enterprises are now more attractive to Corn Belt farmers.

### **Dairy Products**

Milk and manufactured dairy products will continue in a strong position in the market as long as purchasing power remains near wartime levels. The Corn Belt possesses greatest potential capacity for increasing milk production of any of the producing areas. Here, both grain and roughages are available or can be made available in large quantities. With prospects for somewhat reduced production of hogs from war levels, large quantities of grain could be diverted to dairy cows. Hay yields as well as acreages could be expanded greatly. The acreage of rotation pasture will be greater after reconversion and the carrying capacity of all pastures could be raised greatly by proper treatments.

### **Poultry and Eggs**

The number of chickens and commercial broilers produced in the Corn Belt States fell sharply during 1944 from the record 1943 production. With a strong demand for chickens, prices are likely to continue at about 1944 levels. Easier feed supplies may encourage some recovery in production from the 1944 curtailment. No doubt the strong demand for chicken meat will justify the raising of a greater number of chickens for some years to come than in the pre-war period.

Record hen and pullet numbers and record production per bird raised egg production to unprecedented levels



in 1944. Military and lend-lease requirements for dried eggs though high are lower in 1945 than in 1944. Some reduction in production seems desirable. However, the gains that have been made in production of eggs per bird should be retained and the number of hens reduced to provide a better adjustment between total production and prospective requirements.

### Food Crops

In many sections of the Corn Belt, soil, climatic, and market conditions are suited to an increase in the production of potatoes and truck crops for processing or for fresh market. But the limited wartime expansion that has taken place in these crops has been checked by the lack of labor, equipment, and materials, and by the greater attractiveness of alternative crops. With the return of peace, a gradual expansion in these crops can be expected near urbanized areas and in other favored sections. No doubt a greater increase in the acreage of these crops will come in the eastern than in the western Corn Belt States.

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## The Lake States

**T**OTAL agricultural production in the Lake States—Minnesota, Wisconsin, and Michigan—for 1944 will compare favorably with the record crops of the other war years. This is especially remarkable in view of the wet, late spring, shortage of labor, and many other obstacles. The continued high level of production called for in 1945 will be easier of accomplishment because of successful efforts this past year. At this time a year ago the fear of an impending shortage in livestock feed dominated the farm situation in this region. Last year labor, machinery, and fertilizer shortages loomed large as limiting factors in the coming year's production. While these re-

main as important problems in 1945, nevertheless it appears that they will be less important obstacles than they were in 1944.

The most notable feature and the greatest challenge to Lake States farmers is the extraordinary demand for all dairy products. Civilian consumption in 1944 was approximately 101.5 billion pounds as compared with slightly less than 104 billion 1935-39 average. About 19.7 billion pounds are going into noncivilian uses. It is estimated that if there had been no restrictions on civilian consumption during 1944, the total production of milk could have been absorbed by civilians at prevailing prices. The supply of dairy products for the entire United States will not be sufficient in 1945 to meet noncivilian and civilian demands without continuing a program of consumer restrictions. The challenge to Lake States farmers is to come as near as possible to meeting the Nation's needs for more and more milk.

### Dairy Products

A considerable increase in milk production in the Lake States is not expected in 1945. Milk cow numbers have increased every year since 1934 and there were 764,000 more in 1944 than there were at that time, an increase of about 24 percent. Although milk production per cow has continued close to pre-war levels in these three States during the last two years, this increase in milk cow numbers has failed to offset the decrease from the record output of 1942. Among the reasons for this drop in milk production per cow are the following: (1) Failure to cull closely because of the strong demand for milk cows and milk, (2) crowded dairy barns, (3) lack of sufficient high-quality pasture, (4) lack of experienced labor, (5) occasional shortages of particular types of feeds. All of these difficulties can be overcome in the future, but it is unlikely that much progress will be made during 1945. There is ample feed grain available to meet expected needs but

lack of labor and good pastures will continue to limit expansion of the production of dairy products.

### **Pasture Renovation**

The carrying capacity of pastures in the Lake States can be increased materially if full advantage is taken of possibilities for improving the quantity and quality of pasture grasses. Such a program includes (1) planting crops that provide pasture for the entire season, (2) reseeding pastures to provide a full stand, (3) introduction of legumes into the pasture program, (4) greater use of lime, potash, and phosphates, (5) prevention of overgrazing. Undoubtedly more use of these practices is justified by present price relationships.

### **Poultry and Eggs**

The Lake States, together with the adjacent Corn Belt States, provide most of the eggs for shipment abroad. It is here that most of the egg breaking and egg drying plants are located. With a curtailed demand in 1945 for eggs for export, some disturbances in the local market situation may be expected in the vicinity of these plants. The decline in number of hens and pullets on farms in 1945 compared with 1944 may reduce production sufficiently to prevent any recurrence of the market glut that developed in 1944. While egg production in 1945 is likely to be under that of 1944, the production of poultry meat may be well maintained. This is desirable in view of the high requirements for meat in 1945. Increased feed supplies on farms from the 1944 crop and decreased livestock inventories (particularly hogs), together with indications of relatively satisfactory prices for broilers, may result in the raising of more broilers and turkeys in 1945 than in 1944.

### **Hogs**

Minnesota ranks higher than other Lake States as a source of national meat production. Indications are that sufficient feed will be available for a small increase in hog production in

1945 in Minnesota. Relative prices for hogs and corn continue favorable to feeding hogs rather than marketing corn.

Feed grain production in 1944 was somewhat above the previous year although quality in some areas has been adversely affected by bad weather. Biggest increase was in oats where production is about one-fourth greater than in 1943. Corn production is likewise well above a year ago. Production of barley and rye is down but the total tonnage of all four grains is about 10 percent more than last year. These changes in feed grain production reflect shifts which have been made in the acreages of the different crops—more acres of oats and corn and fewer acres of barley and rye. These shifts are likely to remain or even increase somewhat in 1945. Over a longer period, however, a shift toward less small grain and more legumes would aid in soil conservation and add materially to the feed supply.

### **Hay Acreage**

Acreage of all tame hay in 1944 was a trifle below that of 1943 although still about 1 percent above the 1937-41 average. However, alfalfa hay acreage has dropped steadily and is now 15 percent below the 1937-41 average. Total tame hay production in 1944 was about five percent less than in 1943. This reduction of roughage, particularly good roughage, has already caused feed roughage shortages in some areas. Purchase of good alfalfa hay at ceiling prices (beginning at about \$20 per ton) is difficult in many parts of the region.

The hay acreage in 1945 is likely to be about the same or slightly higher than in 1944 because of the competition of other crops. However, the best long-time interests of the region will be served by a program which would materially increase the quantity and quality of the better dry roughages. More lime and fertilizers can be used to excellent advantage on hay crops.

Wheat acreage planted in the Lake States in 1944 was a little less than 2.3

million acres. While this was 24 percent more than in 1943, it was only 83 percent of the 1937-41 average. There may be some increase in acreage in these areas in 1945 unless part of it can be diverted to flax.

The Lake States region is a heavy producer of Irish potatoes. Acreage in the 1937-41 period averaged 656,000 acres. This was exceeded in 1943 but fell to 532,000 in 1944. In addition to the acreage decline in 1944, the yield was also below 1943. The net result was a production only 73 percent as large as in 1943. Potato acreage in 1945 should return to the 1937-41 levels.

Dry edible beans are grown largely in Michigan. This State has the largest acreage of any State in the Nation. The planted acreage of dry beans in the region has risen from an average of 577,000 acres in 1937-41 to 710,000 acres in 1944. Because the Government takes about two-fifths of the total and this requirement is both continuing and urgent, the 1945 acreage should continue at least at the 1944 level. Considerable curtailment may be necessary, however, when war demands cease.

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## The Great Plains

**A**GRICULTURAL production in the Great Plains States<sup>1</sup> is now at a high level. The 1944 acreage of land used for crops increased by 5.4 million acres from 1935-39, but contrary to what occurred during and after World War I, this has been accomplished largely by a reduction in summer fallow and idle cropland rather than plowing up of grassland. These adjustments represent a return of cropping on high-risk land, but they do not involve further inroads on native sod.

<sup>1</sup> North Dakota, South Dakota, Kansas, Nebraska, Colorado, Wyoming, Montana

Adjustments in 1945 should be relatively minor. However, some changes will be necessary in response to changes in national needs and changes in local conditions. Furthermore, the pressure of prices and patriotism has encouraged overexpansion of some enterprises and farmers should now seek to achieve better balance in their production programs.

### Wheat

Prospective supplies of wheat from the 1945 crop now seem ample to meet anticipated world-wide needs as well as national requirements. No material expansion in plantings seems necessary. The 1945 goal for the Plains States is about the same as 1944 plantings. Looking beyond 1945, some problems appear on the wheat farmers' horizon. Unless proper adjustments are made, the world may again have too much food wheat, with attendant low prices. The effect of this upon wheat producers in the Plains has been repeatedly demonstrated. Continued efforts by wheat producers to lower costs through more efficient production in the post-war period will serve as one method of insurance against possible future developments. Combining wheat production with livestock and with some other enterprises has possibilities in some areas.

### Dry Beans and Oil Crops

Under the extreme pressure of war the acreages of flax, dry edible beans, and soybeans were materially expanded in the Plains States in 1943. The increase was particularly extreme in the case of flax. Weather conditions in the spring-planting season were largely responsible for increases in the Dakotas and in Montana. However, returns from flax in 1943 proved disappointing in many instances because of the effect of weeds and disease. Yields of dry edible beans were very low in dry land areas where they were planted for the first time, and soybeans did not produce

well, particularly in South Dakota and Nebraska. As a consequence the acreage planted to these crops in 1944 was reduced materially. The reduction appeared too great in view of the wartime demand for these crops.

A moderate increase over 1944 for these three crops seems justifiable for 1945. After 1945 the acreage of these crops in the Plains should be reduced materially. Discontinuance of wartime price supports likely will reduce these crops to their approximate pre-war proportions in the Plains. But there is some possibility that the acreage of flax and soybeans in Kansas may not recede to pre-war levels.

### **Hay and Rye**

The acreage of tame hay in the Plains has recently been increasing, a recovery from the effects of the severe drought of the 1930's. State production adjustment committees think the increase should continue in 1945 above the 1944 acreage. Further expansion of hay acreage in the post-war period will be helpful to the region from the standpoint of conservation as well as providing the basis for more stable livestock enterprises.

The 1945 goal of about 1½ million acres for rye in the Plains States seems justifiable in view of the fact that the average acreage in 1937-41 was over 2 million. The 1944 acreage was extremely low and so the increase suggested for 1945 represents a moderate recovery.

### **Feed Grains**

Prospective ample supplies of feed grains in relation to requirements in 1944-45 seem to justify a decrease in the aggregate acreage of corn, oats, and barley in 1945. The 1944 acreage in these crops of 38.1 million acres in the Plains States was nearly one-fourth larger than the 1937-41 average. The reduction of one-half million acres in 1945 suggested by the state production adjustment committees seems quite conservative. Together with the suggested decrease of

one-half million acres in wheat it provides sufficient acreage to permit the increases suggested in flax, rye, dry edible beans, soybeans, and sugar beets. If wheat is increased in 1945, larger reductions will be necessary in some other crops. The most logical source would be the acreage of oats and barley. A reduction of 5 percent in the 1944 acreage of oats and barley would provide the required acreage.

After 1945, producers may find it desirable to shift back to oats and barley and make some reductions in acreage of wheat. The likely post-war reductions in acreage of soybeans, dry edible beans, and flax may release additional acreage which may further increase the acreage of the feed grain crops.

### **Livestock**

Three consecutive years of ample moisture and high prices have encouraged material increases in all classes of productive livestock in the Plains States, compared with the average for the period 1937-41. Retention of present livestock numbers is unquestionably profitable, while roughages and grass continue ample and livestock prices are sustained at high levels.

The principal problem of the future is that of achieving an orderly reduction in the event of a widespread drought or a drastic reduction in prices. In view of this, moderate reductions in all classes of livestock, except sows and dairy cows, have been suggested for 1945. Some decline has already begun. The number of sows farrowed in 1944 was sharply reduced below 1943, sheep numbers were reduced moderately, and the number of chickens raised was decreased nearly 20 percent. In spite of these declines, however, the livestock population of the Plains remains high in relation to the normal production of roughages and the normal carrying capacity of pastures on farms and ranches.

Dairy cow numbers should be sustained in 1945 in response to national needs for continued high milk output.

The total number of beef cows in the Plains States, at 3.9 million on January 1, 1944, was 45 percent above the average for the period 1937-41. A moderate reduction from these high numbers is suggested for 1945. After 1945 further reductions may be required.

The number of sows was reduced too drastically in 1944, and an increase is suggested in 1945. This increase would adjust hog production in the Plains States in line with the pre-drought average.

### **Sheep and Lambs**

The number of sheep and lambs in the Plains States on January 1, 1944 was 15.4 million, or 9 percent above the average for the period 1937-41, but 9 percent below the number on January 1, 1943. A further reduction is suggested for 1945 which is in line with national trends. In many of the Plains States it represents a reduction from abnormally high numbers. Scarcity and high cost of the skilled labor required in sheep production is also a discouraging influence. After 1945 the relative advantage of sheep production may improve, especially in the range areas.

### **Poultry and Eggs**

The number of hens and pullets in the Plains States on January 1, 1944, was 63.6 million, or 57 percent higher than the average for the 5-year period 1937-41. This striking increase occurred so quickly that it seems reasonable to assume that development in poultry housing and equipment has not kept pace with it. A moderate reduction has been suggested for 1945 in line with national trends. Improvement in poultry housing and managerial techniques made during the war period may have a lasting effect upon poultry production in the Plains. If this proves to be the case the number of hens and pullets may not be reduced to pre-war levels.

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## **The Western States**

WARTIME demands for direct food crops have caused marked increases in the Western States<sup>1</sup> in acreages of dry field peas, dry edible beans, potatoes, vegetables, cover crop seed and vegetable seed, while decreases have occurred in cotton, sugar beets, and some other crops. Profitable returns for several years with more than normal rainfall and better than average growing conditions have encouraged more intensive use of dry land in some localities, and caused wheat and barley plantings on considerable acreage normally idle. These same circumstances have resulted in pasture and range use beyond normal carrying capacity.

### **Operating Problems**

The difficult problems of labor, machinery, and other shortages that have plagued farmers during the war years may be eased a little in some areas in 1945, but farmers in the Western States will face difficulties longer than farmers in other regions, particularly as greater emphasis is given to the war in the Pacific. Farm labor will continue to be in short supply in 1945, particularly in some areas, and western agriculture depends heavily upon hired labor. Crawler tractors likely will continue scarce next year. This shortage will be felt most in California and in the wheat areas of the Pacific Northwest where a major part of farm power is furnished by crawler type tractors. Transportation problems may develop in 1945. Transportation is exceedingly important to the western region as a large portion of many crops must be shipped to outside markets. These problems must be faced, but generally they should be less acute than during the past year or two.

In looking forward from 1944 and 1945 to adjustments in agriculture

<sup>1</sup> New Mexico, Arizona, California, Nevada, Utah, Idaho, Oregon, Washington.

after the war one must bear in mind not only those changes which a peacetime economy is likely to induce but also those which less favorable weather will impose. Adjustments in the direction of probable peacetime patterns are expected to begin in some instances in 1945.

### Field Peas

Dry field peas for the edible commercial trade will need to be greatly reduced in the Pacific Northwest after the war. Prior to the war (1937-41) the three States of the region—Washington, Oregon, Idaho—produced slightly more than 70 percent of the dry field pea crop—201,000 out of the 280,000 planted acreage. War demands, favorable weather, and price supports designed to encourage production brought plantings to a total of 832,000 acres in 1943, of which 702,000 acres (84 percent) were in these three States.

In the Palouse area where most of this pea acreage is located, temperatures and precipitation during the past 3 years have resulted in yields 30 to 40 percent larger than the pre-war average.

Peas ordinarily replace fallow in the wheat-fallow rotation common to this area but even the peak acreage in 1943 had not replaced all suitable fallow in some localities in Idaho while in other localities plantings had extended into areas unsuited to pea production. Moreover, some farmers in the old pea producing areas were growing peas in succession for from 2 to 3 years, a practice conducive to weed infestation and lower yields. A reduction from the wartime acreage is desirable both from the management and conservation standpoints.

Some reduction from the peak 1943 acreage occurred in 1944. Lowering of the price support on U. S. No. 1 dry edible smooth peas from \$5.65 per 100 pounds for the 1944 crop to \$4.50 for the 1945 crop will cause further curtailment in acreage, but probably not to the announced goal of 60 percent of the 1944 acreage.

Peacetime demand portends still greater reduction. A marked shift to rotations having more clover and grasses used as green manure, and to alfalfa, will reduce soil erosion, which is urgently needed on the rolling lands of Pacific Northwest pea and grain areas. Such rotations will provide for pea acreage more than sufficient to meet prospective demand. Development of market outlets for dry peas both for increased human consumption and also for livestock feed, particularly as a high protein supplement, will be of particular significance to the dry pea producing area in alleviating adjustment problems.

### Dry Beans

Dry bean acreage in the Western region increased 26 percent from 1937-41 to 1943. Plantings in 1944 were about 14 percent below the 942,000 acres of the previous year. Unsatisfactory results obtained by some farmers and more favorable prices for competing crops probably will cause some further reduction. Acreages in 1945, should, however, be maintained or increased in most localities because of urgent war needs. After the war the acreage of beans should be reduced because of the soil erosion and decreased fertility which maintenance of present acreage involves.

### Food and Feed Grains

Wheat, feed grain and rice plantings for 1945 harvest should be maintained in most areas and slightly increased in others because of war requirements for food and feed. Wheat acreage in the Palouse area probably will be increased slightly along with reduced pea acreages. Regardless of demand, the reoccurrence of normal precipitation is likely to result in decreased acreages of dryland wheat and barley in some low rainfall localities. If this does not occur before the wartime demand for these crops disappears, cropping of such land should be discontinued after the emergency is past. Even

after this has been accomplished, the production of wheat in the Pacific Northwest is likely to be sufficiently large to necessitate the use of a considerable amount for livestock feed, in addition to requirements for shipment to other regions and for export.

Disappearance of wartime demand for rice probably will result in a decline in acreage after the war, although acreage in 1945 is expected to be about the same as in 1944.

### **Potatoes**

Except in California where production of early potatoes increased markedly in 1944, the peak of potato acreage was reached in 1943 in the region. Some decrease in early potatoes in California is desirable, but 1944 acreage should be maintained in 1945 in most other localities. Some downward adjustment probably will be desirable after the war, but acreage in the main producing areas perhaps should be larger than pre-war levels.

### **Sugar Beets**

Sugar beet acreage should be increased in 1945 to meet wartime needs for sugar. Shortage of labor and the resulting uncertainty has been an important factor in the reduction of sugar beet acreage during the past two years. Some improvement in this situation is anticipated in 1945; also experience with mechanical cultural and harvesting equipment points to appreciable reduction in labor required for producing sugar beets. While mechanization has not been widely adopted as yet, this development may have significant peacetime implications. Mechanization may enable sugar beets to compete more successfully with other crops.

### **Cotton**

The prospective high support price is expected to result in a slight increase in cotton acreage in 1945 despite ample supplies of cotton. It is not clear at this time just what adjustment in cotton will be desirable in the irrigated areas of the Southwest in the post-war period, but some reduction in acreage appears probable. Feed grains and

forage crops have replaced some cotton during the war period. Whether these will continue to be competitive with cotton is uncertain, but a continuation of such an adjustment should be in the direction of a more stable agriculture in some of these irrigated areas.

### **Flaxseed**

Flax acreage was reduced sharply in 1944 from the 1943 peak. A slight upward adjustment in 1945 is expected even though comparatively high returns prevail for competing crops and the risk involved in flax production is greater. Fall-sown irrigated flax likely will continue to hold an important place in some of the Southwestern areas where experience has demonstrated its suitability.

The effect of profitable returns in stimulating new plantings of fruit trees has not been fully realized because of insufficient nursery stock. Plantings of grapes and some soft fruits have been appreciable.

### **Livestock**

The feed grain and hay supply in this region is somewhat more favorable than a year ago. Lessening of pressure for increases in direct food crops will permit farmers in some feed deficit areas to place slightly more emphasis on feed crop production, but present livestock numbers can be adequately maintained only so long as the exceptionally favorable weather conditions continue. Both for 1945 and the years immediately ahead, decreases in beef cattle and chickens, and slight increases in dairy, sheep, and possibly turkeys and hogs, appear desirable.

### **Range Cattle**

Beef cattle numbers have reached a potentially dangerous high point. Even though the increase in beef cows on farms and ranches in the Western States from 1937-41 to 1944 was only 13 percent compared with 30 percent in the United States, the upward trend in numbers should be reversed. Despite the replacement of sheep by cattle in some instances, many of the

ranges on which western beef cattle are largely dependent for feed are now being used beyond their safe normal carrying capacity. Depletion of the better forage varieties not only decreases carrying capacity but also creates favorable conditions for wind and water erosion, and facilitates encroachment of inferior or non-edible plant growth. War demand for beef may have justified increased stocking of ranges to make full use of forage during the recent period of favorable weather, but ordinarily, opportunities afforded by such periods should be used to increase the normal carrying capacity of ranges.

The present need is for increased marketings to augment the supply of meat and to place stockmen in a stronger position to cope with less favorable range conditions which will occur when precipitation and growing conditions are average or less. Continued increase or even maintenance of present numbers might lead to chaotic liquidation as a result either of an unfavorable feed situation or a decreasing demand accompanied by forced marketings.

Cattlemen in some localities have increased marketings of young stock directly from the ranges this fall and plan to fatten some cows for market. In view of the large number of beef cattle and the need for more meat products, this practice should become more widespread in 1945 and 1946. Where the overall feed situation justifies the use of more hay and grain for fattening purposes, cattle and lamb feeding should be increased sharply. This brings a desirable decrease in peak slaughterings at the time cattle are brought from the range and thus helps to even out the seasonal supply to packers.

#### **Sheep**

The decline in sheep numbers has gone too far in some localities in the Western region. Ewes on farms and ranges decreased 14 percent from 1937-41 to 1944 and have continued to decline during 1944. The decrease

in the three Pacific Northwest States has been so marked (24 percent) that some sheep ranges unsuited for beef cattle are not being utilized at present. This downward trend should be halted or reversed if the best utilization of range resources is to be achieved. However, it appears that scarcity of skilled herders, higher profits from beef cattle, and the increasing stock pile of wool, which sheep producers fear will cause low post-war prices for wool, probably will prevent a reversal of the downward trend at least until 1946.

#### **Milk Cows and Hogs**

Dairy cow numbers decreased slightly in several Western States principally because of lack of sufficient supplies of dairy feed during the summer and fall of 1943. The prospective dairy feed supplies and continued unsatisfied demand for some dairy products make it desirable to restore a slightly upward trend in dairy cow numbers, particularly in interior irrigated areas. The upward trend in number should continue in the post-war period.

Hog production in this region is subject to wide fluctuations. The recent reduction in hogs appears to have been greater than conditions justified. Some increase in 1945 with further increases after 1945, when the prospective hog-feed ratio is favorable, appears to be desirable.

#### **Chickens and Turkeys**

Requirements for poultry products do not call for an increase in chickens in 1945, but improvement in the egg-feed ratio in the West may result in some increase in chicken numbers.

Turkey raising was sufficiently profitable in 1943 and 1944 to induce growers in all Western States, except New Mexico, to increase numbers. Numbers should be maintained in 1945 and it should be possible to develop markets for a gradual increase in turkey production after the war.

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*Bureau of Agricultural Economics*



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14 = 100				Index of prices received by farmers (August 1909-July 1914 = 100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1934.....	75	76	109	122	129	95	101	89	70	84
1935.....	87	86	117	125	130	103	114	116	116	115
1936.....	103	100	118	124	127	111	125	114	118	120
1937.....	113	117	126	131	133	126	130	110	132	127
1938.....	89	91	115	123	126	125	114	108	115	113
1939.....	109	105	113	121	124	123	110	95	112	108
1940.....	125	119	115	122	125	126	119	96	111	112
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	233	144	152	150	201	162	151	188	173
1943.....	239	305	151	167	162	264	193	190	209	200
December.....	241	316	151	173	187	-----	203	212	194	200
1944-January.....	243	319	151	174	188	275	201	177	194	193
February.....	244	321	151	175	189	-----	201	168	199	194
March.....	241	318	152	175	189	-----	199	162	203	194
April.....	239	313	152	175	189	292	196	151	203	191
May.....	237	313	152	175	189	-----	194	153	201	190
June.....	235	318	152	176	170	-----	192	154	200	189
July.....	231	306	152	176	170	328	194	165	197	190
August.....	232	310	152	176	170	-----	196	171	201	194
September.....	231	307	152	176	170	-----	198	179	200	196
October.....	232	306	152	176	170	825	201	190	201	199
November.....	232	-----	152	177	171	-----	203	207	200	202
December.....	-----	-----	-----	178	171	-----	203	211	198	202

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>4</sup>	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops			All crops
1934.....	91	95	159	97	95	88	95	98	90	70
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	108	102	165	95	112	92	104	107	114	90
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	176	67	88	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	98	73	111	88	100	80
1941.....	97	89	169	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	100
1943.....	148	147	325	180	190	179	245	183	192	119
December.....	166	165	349	180	202	208	223	192	196	117
1944-January.....	170	168	350	182	203	204	207	199	196	117
February.....	170	169	348	161	205	206	247	196	195	115
March.....	169	171	351	181	207	215	242	198	196	116
April.....	171	172	352	183	207	227	220	200	198	116
May.....	170	173	350	180	208	232	225	198	194	114
June.....	165	170	350	183	210	228	231	197	193	114
July.....	161	168	350	184	209	230	195	194	192	113
August.....	156	166	355	182	209	214	186	191	188	114
September.....	155	162	338	170	207	206	166	158	182	113
October.....	164	161	357	171	211	205	153	187	194	114
November.....	165	157	363	168	215	195	188	189	196	115
December.....	167	160	364	168	215	206	228	196	200	117

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

Note.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing, whereas the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# SPRING PLANTING ISSUE THE AGRICULTURAL • SITUATION •

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*A Brief Summary of Economic Conditions*

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THROUGHOUT the country farmers are now making their spring planting decisions for another year of top agricultural production. The 1945 goals totaling some 364 million acres, 3 percent above that planted in 1944, will serve as guides, but the final decision rests with each farmer. \* \* \* Total demand for the 1945 output of American farms will continue strong. Food requirements in Europe for military and civilian needs will remain large for many months to come, however favorable the progress of the war. Pacific food requirements will increase as the weeks go by. Despite rationing restrictions, civilian per capita consumption of food—last year 9 percent above pre-war—will continue above pre-war levels. \* \* \* Stocks of many important agricultural commodities are being consumed at a heavier rate than usual, so that by the time the production of 1945 becomes available the Nation's inventory of these commodities may be considerably less than a desirable reserve. \* \* \* If the goals are met and if average weather is assumed, 1945 agricultural production would be, it is now estimated, about a fourth larger than the 1935-39 pre-war average, but 5 to 10 percent below the record output of 1944.

# Commodity Reviews

## LIVESTOCK

**M**AJOR changes in the Cattle Stabilization Plan, effective January 29, are designed to more effectively control cattle prices and thus protect consumers against any increase in the cost of beef.

The Cattle Stabilization Plan, as inaugurated in late 1943, set an over-all ceiling on cattle prices based upon the consist of cattle slaughtered by individual slaughterers over a monthly period and upon the location of the slaughtering plant. The plan set a price range for each grade of cattle, but allowed slaughterers to pay more than or less than these prices for individual lots or grades of cattle. They could pay more only if the average cost of cattle slaughtered over a monthly period fell within the limits of an over-all minimum and maximum cost range, determined from the liveweight slaughter by grades and the maximum and minimum prices for the individual grades. To effect compliance under the plan, a slaughterer's subsidy payments were reduced if the total cost of cattle slaughtered fell outside the over-all cost range.

The recent changes under the plan set a specific ceiling on all cattle and calves on the basis of \$18 at Chicago. After July 2, 1945, this specific ceiling will become \$17.50. The revised plan also makes it an OPA violation for slaughterers to pay more for cattle than the maximum of the calculated permissible cost range over a monthly period, gives OPA the authority to limit the percentage of Good and Choice cattle that a slaughterer may kill over a monthly period, increases the rate of subsidy payments for Good and Choice cattle, increases the maximum price range for Good and Choice cattle, and adjusts minimum prices for some grades in some areas.

Some of the effects of the revised plan during the next few months are likely to be as follows: Cattle prices may average about the same during the first half of 1945 as in this period of 1944, when cattle costs fell within the limits of the stabilization range. Cattle prices during this period in 1944 did not reach the \$18 ceiling, Chicago basis. Cattle slaughter during the first half of 1945 may be moderately larger than a year earlier. However, supplies of beef were insufficient to meet the demand at ceiling prices and this situation will continue in 1945. Cattle feeders, as in the past year, will tend to feed cattle for a short feeding period and supplies of top fed cattle throughout the year will be relatively small. The strong demand for cattle by slaughterers during the first half of 1945 will tend to hold prices for feeder cattle at a relatively high level, and the number of cattle finished to Choice and Prime grade for market during the last half of the year may tend to be small.

Hog prices may continue at or near the ceilings during the first 9 months of this year. The combined spring and fall pig crop of 1944 totaled 87 million head, 29 percent less than in the previous year. Slaughter for the year 1945 may total 20 to 25 percent less than a year earlier and most of this reduction will occur in the first three quarters of the year. WFA announced an extension of the hog price support program until March 31, 1946, on the basis of \$12.50 at Chicago for Good and Choice butcher hogs. This support price commitment will cover marketings of the 1945 spring pig crop.

The number of sheep and lambs on feed at the beginning of this year was slightly larger than a year earlier. Slaughter of sheep and lambs from January through April probably will total about the same as in the first 4

months of 1944. Lamb prices may average about the same as in this period of 1944.

## FOOD

**L**AST year civilian food consumption per capita was an all-time record, but is unlikely to continue at this high level in 1945 even though well above the 1935-39 pre-war average.

Meat supplies for civilians this year will fall considerably below the record amount in 1944 of 147 pounds per capita. These supplies may be only 128 to 133 pounds per person which is still above the 126 pound average for 1935-39. Most of the decrease will be in pork, with over-all meat supplies expected to be larger in the late fall following the seasonal increase in slaughter.

The present large egg consumption is expected to continue through 1945, possibly reaching 355 to 360 eggs per person. Chicken supplies will be slightly over 20 pounds per capita, about 2½ pounds less than in 1944.

**Civilian Consumption of Principal Foods,  
Calendar Years, 1935-39 Average,  
1944 and 1945**

Food item	Consumption per capita in pounds		
	1935-39 average	1944	1945 preliminary
Red meats.....	126	147	132
Poultry meats.....	21	26	24
Eggs <sup>1</sup> .....	268	349	358
Fluid milk and cream.....	340	421	420
Cheese.....	5.5	4.7	4.8
Butter.....	17	12	11
Fats and oils <sup>2</sup> .....	31	33	31
Fresh fruits.....	138	147	142
Processed fruits <sup>3</sup> .....	25	26	(9)
Fresh vegetables.....	235	250	238
Processed vegetables <sup>4</sup> .....	33	34	(9)
Potatoes and sweetpotatoes <sup>5</sup> .....	153	134	(9)
Sugar.....	97	88	78
Corn products.....	39	43	45
Wheat flour.....	134	160	160
Coffee.....	14	16	16
Tea.....	0.7	0.5	0.7
Cocoa.....	4.4	3.4	3.5

<sup>1</sup> Number, not pounds. <sup>2</sup> Excludes butter.

<sup>3</sup> Pack year. <sup>4</sup> Figures for 1945 not yet available.

<sup>5</sup> Crop year.

If military requirements do not increase much over 1944, civilian turkey supplies will be about the same as in the past 2 years.

On a milk equivalent basis, civilian supplies of all dairy products in 1945 will be about the same as in 1943, but a trifle below 1944. Most of the reduction will be in butter. Fluid milk, cream, cheese, condensed milk, and ice cream will be about the same, while civilians may get more cottage cheese, evaporated milk, buttermilk, dried skim milk and chocolate milk.

The civilian supply of all fats and oils will be about 42 pounds per capita in 1945, about 6 percent below last year. Smaller lard and butter production plus large non-civilian requirements are the chief cause.

Market supplies of all fresh and processed fruits and vegetables may be a little less in 1945 than in 1944.

## DAIRY PRODUCTS

**P**RICES received by dairy farmers for the first half of 1945 will average about the same as a year earlier, because of the little change in wholesale and retail price ceilings. But returns for the first quarter of 1945 will be larger because of higher dairy production payments.

Milk production on farms for 1944 totaled 119.2 billion pounds, almost equal the 1942 record. During the last quarter of 1944, record unit returns and ample feed supplies, plus a long and mild autumn resulted in a milk production at an annual rate of 120 billion pounds. Continuation of this high rate is in prospect for the first part of 1945.

With milk production increasing seasonally from January through June and ahead of the corresponding period of 1944, output of whole milk products, especially evaporated and dried whole milk, will remain at high levels. However, this will probably be accompanied by declines in creamery butter output compared with the previous year.

To fulfill urgent noncivilian needs, 20 percent of the February creamery output and 25 percent of the March production must be set aside for sale to designated governmental agencies. This will reduce civilian supplies mate-

rially during February and March from those available in the same months of 1944. In 1944 the butter set-aside was put into operation on April 1, at which time the set-aside was placed at 10 percent.

### 1945 Agricultural Goals, With Comparisons

Commodity	1935-39 average	1944 actual	1945 goal	1945 goal as percent of—	
				1935-39	1944
Planted acres unless indicated otherwise					
Grain crops:	Thousands	Thousands	Thousands	Percent	Percent
Wheat (net planted acres except 1935-39) .....	73,235	65,454	67,731	92	103
Corn.....	97,055	98,722	99,098	102	100
Oats.....	40,586	42,983	44,259	109	103
Barley.....	13,364	14,300	13,911	104	97
Sorghums (except sirup).....	15,029	18,017	17,155	114	95
Rye <sup>1</sup> .....	3,699	2,254	2,515	68	112
Rice.....	1,007	1,432	1,405	140	95
Vegetables:					
Fresh market truck <sup>1</sup> .....	1,745	1,873	1,683	96	90
Process truck.....	1,479	2,051	2,155	146	105
Dry beans.....	1,917	2,228	2,277	119	102
Dry peas.....	281	727	457	103	63
Potatoes.....	3,123	3,010	3,137	100	104
Sweet potatoes.....	804	777	841	105	108
Oil and fiber crops:					
Soybeans for beans <sup>1</sup> .....	3,042	10,502	10,757	354	102
Peanuts grown alone.....	2,173	4,012	3,955	182	99
Flaxseed.....	1,938	3,052	5,000	258	164
Cotton.....	28,496	20,356	20,507	72	101
Broomcorn.....	1,317	1,380	870	117	97
Sugar crops:					
Sugar beets.....	892	639	951	107	149
Sugarcane <sup>1</sup> .....	287	295	337	117	114
Tobacco crops: <sup>1</sup>					
Flue-cured.....	981	1,007	1,043	106	103
Burley.....	372	473	503	135	105
Other domestic (except perique).....	293	232	258	88	111
Hay and seed crops: <sup>1</sup>					
Timothy hay.....	55,770	59,547	62,882	113	106
Cover crop seeds <sup>1</sup> .....	120	330	469	291	142
Hay crop seeds <sup>1</sup> .....	2,737	4,783	4,899	179	102
Total acres (excluding hay seeds).....	348,005	354,703	363,635	104	103
Livestock numbers:					
All cattle and calves, Dec. 31.....	66,814	479,800	77,306	116	97
Beef cattle, Dec. 31.....	31,401	41,300	39,200	125	95
Cattle and calf slaughter (head).....	24,710	33,900	35,000	142	103
Milk cows, average for year.....	23,548	26,112	26,363	112	101
Sows to farrow in spring.....	6,817	9,187	9,569	140	104
Spring pigs saved.....	41,872	55,428	57,563	137	104
Sheep and lambs, Dec. 31.....	51,344	50,000	49,136	96	98
Chickens raised on farms.....	664,373	745,800	745,800	112	100
Commercial broilers raised.....	69,687	223,000	223,000	306	100
Turkeys raised.....	27,006	35,666	35,666	132	100
Livestock products:					
Milk production (pounds).....	103,624,000	419,300,000	420,582,000	116	102
Egg production (dozens).....	3,032,000	4,790,000	4,350,000	143	91

<sup>1</sup> Harvested acres.

<sup>2</sup> Includes hairy vetch, common and Willamette vetch, Austrian winter peas, crimson clover, and common ryegrass.

<sup>3</sup> Includes alfalfa, red clover, alsike clover, sweet clover, ladino clover, and lespedeza.

<sup>4</sup> Preliminary.

The final agricultural production goals for 1945 represent the total of State goals recommended by farmers, farm leaders, and State agricultural officials. The goals are on a more selective basis than in previous years, with some shifts in the pattern of production to meet changing demand situations.

Total crop acreage of 363,635,000 in the 1945 goals is nearly 3 percent larger than the 1944 planted acreage. For flaxseed, sugar beets, and cover crop seeds, the goals have been materially increased over 1944. Moderate increases over 1944 acreage are asked for dry beans, potatoes, and tobacco. The goals for legume hay seeds and for soybeans are maintained at the record 1944 levels. Recent increases in military needs have resulted in an increase in the pack goals for vegetables for processing.

Livestock goals call for increased milk production, and for a larger slaughter of cattle to meet the increased military and civilian demands for meat. State recommendations called for an increase in the goal for spring pigs and the War Food Administration recently urged farmers to keep more sows for spring farrowing to help meet this goal. Because of recent changes in needs, the 1945 egg goal has been increased over that originally discussed with State leaders; it can be achieved only through normal culling of hen members now on farms.

## TOBACCO

**A**LTHOUGH the over-all consumption of tobacco products is continuing at an exceptionally high rate, it appears to have reached a peak for the war period. While it is likely that after VE-Day, the labor situation and other conditions may permit some further expansion in the production of tobacco products, particularly cigarettes, it seems likely that the over-all demand for tobacco products will decline below present record levels. Among the factors which would tend to cause a decline in demand would be a drop in consumer income, reductions in military personnel, and reduced use of tobacco products in war plants where consumption is unusually high.

Demand for all types of leaf tobacco continues exceptionally strong and prices are at or near the highest level ever received by growers. All major types, except fire-cured and dark air-cured, have been brought under maximum price regulations again this season, and flue-cured and burley have been allocated to manufacturers and dealers in a manner similar to last season.

Total production of all types of tobacco in 1944 is now placed at 1,835 million pounds, nearly one-third larger than the 1943 crop and only 2 percent less than the record crop of 1939. Inventories of leaf tobacco are somewhat below a year ago, but the indicated supply is a little larger than last year.

Although stocks of flue-cured are now higher than in most pre-war years, they, as well as stocks of burley and some of the other types, are low in relation to present rate of disappearance. With domestic consumption tending to level off, little or no further reduction in stocks is anticipated.

The outlook for exports of flue-cured tobacco, though still dominated by war, continues reasonably favorable. The Commodity Credit Corporation purchased approximately 330 million pounds from the 1944 flue-cured crop, most of which are earmarked for export. Exports of dark tobacco are now at a low level although they may increase somewhat as shipping facilities become available and as additional countries are liberated. Increased foreign demand for flue-cured may also follow soon after VE-Day, but total tobacco exports may decline over a longer period of time. Production on the Continent of Europe has increased since the beginning of the war, and as foreign stocks are built up to normal, exports from this country may decline to a relatively low level.

## FATS AND OILS

**A** DECLINE of 2½ to 3 pounds per capita (roughly 6 percent) in civilian takings of food fats is probable in 1945, chiefly a result of a reduced output of lard and butter, and continued large military and lend-lease

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
1935-39 average.....	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	156	106
1943.....	192	162	119
1944.....	195	170	115
1944			
January.....	196	168	117
February.....	195	169	115
March.....	196	169	116
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

requirements. Creamery butter production in recent months has been 6 to 8 percent smaller than a year earlier and probably will continue for a few months, at least, moderately below the level of a year earlier. Also, 20 percent of February creamery butter output and 25 percent of March output will be set aside for Government purchase. In 1944, no set-aside was in effect until April.

Output of lard and rendered pork fat in 1945 is expected to total about 2.4 billion pounds, approximately 850 million pounds less than in 1944. Beginning January 21, packers were required to reserve for Government purchase about 60 percent of the output of federally inspected lard. This will be used to meet military and lend-lease requirements. If exports of lard continue at the high 1944 level, civilian consumption of lard in 1945 may be reduced as much as 1.8 pounds per capita (about 13 percent).

With less butter available, civilian consumption of margarine in 1945 may be somewhat larger than a year earlier, especially in the January-

March quarter. Civilian supplies of shortening and edible oils in 1945 probably will be about the same as in 1944.

The War Food Administrator announced in early January that payments of \$5 will be made to farmers for each acre planted to flaxseed up to the number of acres set for each farmer as his farm goal. The sum of the farm goals in the country probably will be between 5 and 6 million acres, compared with a 1944 planted acreage of slightly over 3 million.

With imports of Argentine flaxseed curtailed in recent months, and with uncertain prospects for resumption of these imports, there will be a tight situation in linseed oil until the 1945 crop of flaxseed reaches crushers. To conserve linseed oil, manufacturers' quotas of oils and fats to be used in civilian paint, varnish, linoleum, and oilcloth recently were reduced from 70 to 60 percent of average use in 1940 and 1941.

Liberation of the Philippines will eventually give the United Nations access to one of the world's major oil and fat producing areas. Before the war, the Philippines exported 750 to 900 million pounds annually of coconut oil and copra, in terms of oil, with about 80 percent going to the United States. Coconut oil is used in the United States mainly for soap—300 to 400 million pounds annually were used by soap manufacturers before the war. However, the chief difficulty in re-establishing trade with the Philippines will be to provide the necessary ocean-shipping space, with a large volume of exports of copra or coconut oil from there not expected for a year or more.

## FEED

**D**ISAPPEARANCE of feed grains for all purposes, and the quantity of wheat and rye fed to livestock was smaller during the October-December quarter of 1944 than in the corresponding quarter of 1943, reflecting the reduced number of livestock in the

country. However, disappearance of feed grains was larger during October-December than the average for that quarter during the 1938-42 period. The quantity of wheat and rye estimated to have been fed during the October-December quarter was materially smaller than a year earlier, but larger for that period than in any other year.

Combined stocks of corn and oats in all positions except interior mills and elevators on January 1 were 8 percent larger than on January 1, 1944, and were the third largest on record for that date. Stocks of barley on farms and at terminal markets on December 1 were 5 percent smaller than a year earlier, and 14 percent smaller than the average for the 1939-42 period.

With relatively abundant supplies available in relation to total requirements, prices received by farmers for corn, oats, and grain sorghums for the 1944-45 marketing season as a whole are expected to average slightly less than in the 1943-44 season. Prices

of barley and hay, on the other hand, probably will average slightly higher. Prices of most byproduct feeds are expected to remain near present levels for the next few months.

The demand for feed concentrates—grain and by-product feeds—is expected to continue strong throughout the 1944-45 feeding season, although not so strong as in either of the two previous seasons. Requirements for livestock feed are smaller this year than in the 1942-43 or 1943-44 seasons because of the reduced numbers of livestock on farms, particularly hogs and chickens. Factors which at least partially offset the reduced demand for concentrates by the smaller livestock population include (1) increased demand for feed grains for industrial and food uses; (2) Government program to stockpile 50 million bushels of corn for use in possible emergencies. In addition, reduced feeding of wheat and rye this year will, in effect, absorb part of the reduced demand from livestock.

### Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State

	5-year average		January 15, 1944	December 5, 1944	January 15, 1945	Parity price January 15, 1945
	August 1909- July 1914	January 1935-De- cember, 1939				
Wheat (bushel).....dollars	0.834	0.837	1.46	1.45	1.46	1.52
Corn (bushel).....do	.642	.601	1.13	1.06	1.07	1.10
Oats (bushel).....do	.399	.340	.775	.694	.721	.696
Rice (bushel).....do	.513	.742	1.88	1.75	1.75	1.40
Cotton (pound).....cents	12.4	10.34	20.15	20.85	20.20	21.37
Potatoes (bushel).....dollars	.697	.717	1.41	1.50	1.58	1.25
Hay (ton).....do	11.87	8.87	15.70	16.50	17.10	20.40
Soybeans (bushel).....do	1.96	.954	1.82	2.05	2.06	1.63
Peanuts (pound).....cents	4.8	3.55	7.19	8.15	8.14	8.26
Apples (bushel).....dollars	.96	.90	2.73	2.33	2.46	1.65
Oranges, on tree, per box.....do	1.81	1.11	1.70	2.23	1.98	2.03
Hogs (hundredweight).....do	7.27	8.38	13.80	13.40	13.80	12.50
Beef cattle (hundredweight).....do	5.42	6.66	11.20	11.50	11.70	9.32
Veal calves (hundredweight).....do	6.75	7.80	12.70	12.90	13.20	11.90
Lambs (hundredweight).....do	5.93	7.79	12.50	12.40	13.00	10.10
Butterfat (pound).....cents	26.8	29.1	50.8	51.0	50.9	47.0
Milk, wholesale (100 pounds) <sup>1</sup> .....dollars	1.60	1.81	3.38	3.39	3.35	2.91
Chickens (pound).....cents	11.4	14.9	23.9	24.1	24.2	19.6
Eggs (dozen).....do	21.5	21.7	34.6	44.5	41.0	37.4
Wool (pound).....do	18.3	23.8	40.4	40.4	40.1	31.5

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county A.A.A. offices.

<sup>6</sup> Adjusted for seasonability.

<sup>7</sup> Preliminary.



With feed requirements reduced, and corn supplies relatively large, a carry-over of corn nearly double the carry-over at the end of the 1943-44 season is in prospect for the end of the present marketing year. Carry-over of oats next July 1 probably will be moderately larger than a year earlier.

In late 1944 and early 1945 the severe weather, manpower shortages and difficulties in obtaining transportation all combined to restrict the movement of feed grains from surplus-producing areas. In some deficit feed areas, particularly the Northeast, the small in-shippments plus the heavy rate of feeding in recent weeks reduced feed supplies sharply in these areas.

## SUGAR

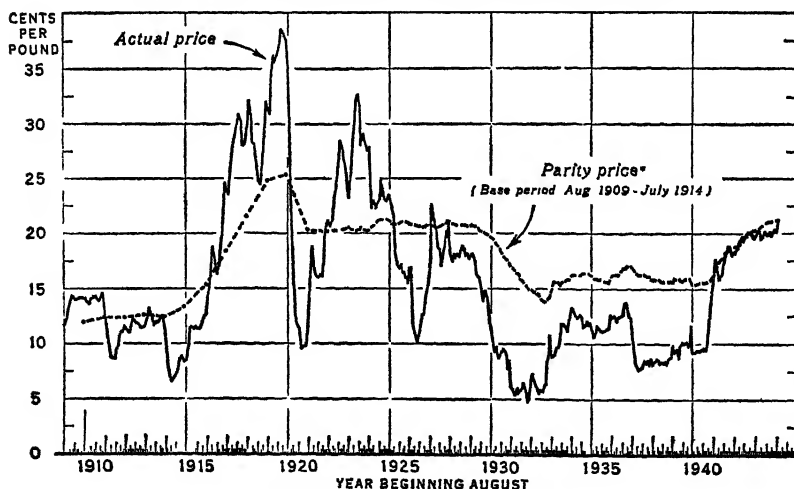
**D**ISTRIBUTION of sugar for civilian and military consumption in continental United States during the calendar year 1944 totaled 7,128,131 short tons (raw value), 13 percent more than in 1943. Except for 1941, this is the largest on record.

Deliveries of sugar for export during 1944 amounted to 311,721 tons—155,133 tons less than in the previous year. Consequently, the total distribution by primary distributors of 7,439,852 tons was only 9 percent larger than the amount distributed in 1943.

Cane sugar refiners supplied three-fourths of the total sugar distributed in 1944 as compared with slightly more than two-thirds in 1943. In contrast, the amount distributed by sugar beet processors decreased from 22 percent of the total in 1943 to 16 percent in 1944.

Increased distribution of sugar in 1944 was accompanied by a substantial reduction in stocks during the year. On December 30, 1944, refiners' stocks of raw and refined sugar (raw value) amounted to only 389,465 tons—46 percent below 1943. During the same period, the stocks held by beet processors declined 11 percent to 746,991 tons. Stocks held by importers and mainland cane mills were also substantially reduced during the year.

COTTON: PRICE RECEIVED BY FARMERS AND  
PARITY PRICE, UNITED STATES, 1909-44



\*PARITY PRICE NOT AVAILABLE BY MONTHS, 1910-22

# ANOTHER HARD FARM YEAR AHEAD

**A**S FARMERS make their plans for the rapidly approaching spring planting season they are faced with their greatest challenge in this our fourth year of war. In spite of increasingly difficult wartime production problems they are being called upon to exceed even their exceptionally high crop acreage of 1944.

Food supplies must be kept flowing in a never-failing stream to fighting fronts over much of the globe—there can be no let-down in food production in 1945. Food must go to war in even greater quantities as our battle lines are extended. Meeting these increased needs will be difficult and every help for farmers that agricultural agencies can provide will be important. The needs are greater as we bend our energies into an all-out war effort.

The task ahead for everyone will be greater than ever in 1945, but farm people have demonstrated that they can do difficult tasks well and I am confident they will find a way to meet our war needs again this year.

MARVIN JONES  
*War Food Administrator*

## Farm Price-Support Programs for 1945

**NOTE:** The support prices summarized here are contingent upon congressional authorization to provide necessary funds. Also, the prices listed are national averages for the year and are not necessarily the prices a given farmer would receive at a given time.

**S**UPPORT prices for needed crops and classes of livestock are an integral part of the war food program of 1945. They assure specified returns and are the farm equivalent of the contract prices with the producers of guns, ammunitions, ships, tanks, airplanes, clothing, and other war materials. Moreover, the relative

levels at which these support prices are established constitute one of the more important devices available to the War Food Administration for encouraging the most desirable pattern of agricultural production.

The chief legislative bases for the support-price program are the Agricultural Adjustment Act of 1938, as supplemented by the act of October 2, 1942, and the so-called Steagall Amendment approved July 1, 1941, as amended October 2, 1942. Prices must be supported for a period extending until 2 years after the January 1 following the date on which the President or Congress proclaim hostilities to have ended.

This legislation requires that the basic crops—corn, cotton, wheat, rice, tobacco, peanuts for nuts—be supported at 90 percent of parity

(92½ percent in the case of cotton) if marketing quotas have not been disapproved, regardless of whether a support at such level is necessary to obtain the needed wartime production. Prices must also be supported at not less than 90 percent of the parity or comparable price for any nonbasic commodity which has been found necessary to substantially expand in production.

Under this legislation lending and purchase operations shall also be carried out to bring prices and incomes of producers of nonbasic commodities not covered to a fair parity relationship with other commodities—to the extent funds are available and producers are able to bring supplies in line with demand.

Because prices generally must be supported at about 90 percent of parity, it is necessary to establish support prices for some of the more urgently needed commodities at levels considerably above parity in order to assure prices attractive enough to obtain the necessary shifts in production.

So far, an expanded production has been asked for hogs, eggs, chickens (excluding chickens weighing less than 3 pounds live weight and all broilers) turkeys, milk and butterfat, designated varieties of dry peas, designated varieties of dry beans, soybeans for oil, flaxseed for oil, peanuts for oil, potatoes, cured sweetpotatoes, and American-Egyptian cotton.

#### **Other Commodities Included**

In addition to the commodities for which support prices have been formally proclaimed under the Steagall Amendment or for which loans are specifically required by legislation, support prices or loans are proposed for 1945 for a number of other commodities, including sugar beets, sugarcane, rye, barley, grain sorghums, vegetables for canning, and a number of grass and legume seeds.

Support-price programs are carried out through purchase of commodities for military, lend-lease, and other governmental uses, including purchases for the school lunch program, and other distribution programs; or through loans, purchases, and other operations conducted by the Commodity Credit Corporation.

In general, the support prices for livestock and livestock products extend through December 31, 1945, while the support prices for crops grown and harvested in 1945 extend through June 30, 1946. In the case of hogs, however, support prices have been announced for the period ending March 31, 1946, in order to assure returns from the spring pig crop of 1945.

#### **How Prices are Supported**

The method used in supporting prices and the levels they are to be supported at are indicated in the following summaries of the various commodities covered in the price-supporting programs.

**Wheat, corn, cotton, American-Egyptian cotton, rice, tobacco.**—Loans at 90 percent of parity (92½ percent in the case of cotton) will be made available to farmers.

**Peanuts.**—Peanuts produced in 1945 will be supported at base prices to farmers of \$160 per ton for Spanish, Virginia and Valencia types and \$145 per ton for Runner types. The War Food Administration, the only authorized buyer of 1945 crop peanuts, will enter into price supporting contracts with shellers, crushers and producer cooperative associations under which they will agree to purchase peanuts from farmers for the account of the Administration at not less than the support prices.

**Soybeans.**—Prices will be supported at \$2.04 a bushel for the basic grade of designated types delivered to country elevators or other normal delivery points. Nonrecourse loans will be made available to producers at support prices, and WFA will also offer to

purchase at support prices and to enter into price supporting contracts with processors.

**Flaxseed.**—Loans at announced support prices will be made available to farmers. Announced support prices for No. 1 grade at selected points include \$3 per bushel delivered to processor's plant in car lots at Minneapolis, Minn., and Portland, Oreg.; \$2.85 at Emporia, and Fredonia, Kans.; \$2.80 at Corpus Christi, Tex.; and \$3.20 per bushel at Los Angeles and San Francisco, Calif.

To meet the greatly expanded flaxseed goal for 1945, production payments of \$5 per acre will also be made to growers for each acre planted to flaxseed up to the acreage set as a farm goal.

**Dry edible beans and peas.**—Certain designated types of dry edible beans and peas will be supported by means of purchases in carlots, cleaned and bagged, f. o. b. country shipping point. Price supporting contracts will be offered country shippers. Purchase prices of U. S. No. 1 grade beans range from \$8 per hundredweight for Red Kidney beans to \$5.75 per hundredweight for pinto beans. Purchase prices of designated varieties of dry edible peas, smooth type, are generally \$4.50 per hundred pounds for U. S. No. 1 grade.

In addition, loans will be made available to farmers on thresher-run beans of certain types at a rate of \$5.50 per hundred pounds for U. S. No. 1 grade (pinto beans, \$4.50).

**Potatoes and sweetpotatoes.**—Potatoes will be supported at levels calculated to reflect 90 percent of parity by means of purchases of early and intermediate potatoes and loans on late potatoes and cured sweetpotatoes. Support prices on white potatoes will apply only to potatoes which will grade U. S. No. 1 or U. S. Commercial containing not less than 80 percent U. S. No. 1 quality. Specific support price schedules will be announced at a later date.

**Hogs.**—During the period ending March 31, 1946, hogs will be supported at not less than 90 percent of parity, and in no event less than previously designated prices. For Chicago this price is \$12.50 for good choice butcher hogs weighing 200 to 240 pounds. Support operations will be carried out by purchase of federally inspected pork products at prices that will enable packers to pay support prices.

**Milk and butterfat.**—Announcement has been made of production payments through the end of March 1945. The payment rates on whole milk deliveries vary by regions from 60 to 90 cents a hundredweight. The payment rate on butterfat is 10 cents per pound for all areas. Similar payments are planned for the balance of the year but with lower rates during the spring and summer.

**Eggs.**—WFA will support prices to farmers for candled eggs at 27 cents a dozen, and, where candling facilities are not available, current receipts will be supported at 24 cents a dozen. In addition, purchase operations of dried and frozen eggs and of high grade shell eggs for export will be conducted.

**Chickens and turkeys.**—Chickens with certain exceptions and turkeys will be supported at 90 percent of the parity price. The exceptions are all broilers and other chickens weighing less than 3½ pounds live weight.

**Wool.**—The WFA will offer to purchase wool of the 1945 domestic clip delivered to warehouses or customary assembly point, at present ceiling prices less specified marketing charges. Purchases will be made through established dealers.

**Sugar beets.**—Price support operations, including payments to growers by means of price supporting contracts with processors, calculated to return to growers an average of \$12.50 a ton for sugar beets, will be conducted.

**Louisiana and Florida sugarcane.**—WFA will make payments to growers, through processors, amounting to ap-

proximately \$1.60 per ton of sugarcane.

**Rye, barley, and grain sorghums.**—Loans will be made available to farmers at approximately 75 cents per bushel for rye; 80 cents per bushel for barley; and \$1.65 per hundred pounds for grain sorghums of acceptable grades.

**Vegetables for canning.**—Prices to farmers for snap beans, sweet corn, green peas, and tomatoes, grown for canning will be supported through price supporting contracts with certified canners. The 1945 support prices on a national basis will be the same as in 1944 for tomatoes, corn,

and green peas, but \$6 a ton less for snap beans. On a national average the 1945 support prices are as follows: Tomatoes, \$25.25 a ton; sweet corn, \$18 a ton; green peas, \$83.50 a ton; snap beans, \$85 a ton.

**Winter cover crop seeds; hay and pasture seeds.**—Price support operations will be conducted for certain winter cover crop seeds, and hay and pasture seeds. Support operations for the former group will consist largely of purchases of cleaned seed at specified prices, and for the latter group of loans to farmers.

H. B. BOYD, *Director*  
*Office of Price, WFA*

## 1945 Farm Equipment Supplies

AMERICAN farmers are planning another year of top agricultural production despite increasing difficulties in producing new farm machinery and other equipment due to urgent military requirements. Every effort is being directed to obtain the necessary priorities and manpower ratings—to the extent possible under present military needs—to complete the various farm machinery production programs.

The situation is tight. Large-scale improvement is impossible, due to emphasis on military production. Although production of new machines will add to the total inventory of some modern labor-saving machines and also permit the essential replacement of some implements on some farms, there will not be enough of any new machines to justify replacement of any machinery which can be made to serve another season.

Current machinery production schedules are somewhat smaller than last year's total production, which included some production authorized under the previous year's program. However, if current production sched-

ules are met, the new machinery available for use in the crop year of 1945 would just about equal the amount available for use in 1944. (This includes some which were made too late for use in 1944 and will be used this year for the first time.)

Unfortunately, production is running behind schedule. At the time the final crop production goals were determined, the lag amounted to around 25 percent, not counting repair parts, attachments, and wheel tractors. Production of wheel tractors was about on schedule, though the total authorized for this year is smaller than last year's actual production. Efforts are being made to get the production of other machinery up to schedule, but shortages of various materials and manpower in the plants presents many difficulties which may not be entirely solved as long as direct military requirements remain at present high levels.

Production of repair parts is expected to be very large again this year. There was a record supply last year, and the Government continued the policy of encouraging production by

authorizing materials without quota restrictions. Spot shortages of some parts for some of the older machines will not be avoidable. In general, however, farmers can expect to have enough parts to keep existing machines in operation, especially if they continue to check the machines before the season of use and if they practice good maintenance.

Trucks and truck tires will also require the most careful conservation. Both will be scarce, although some light trucks will be made available to farmers for the first time in the war. Farm transportation problems probably will reach a new peak.

If the effects of the weather and the manpower situation could be foretold with certainty, farmers would have a much better idea as to whether available equipment will suffice. Without that foreknowledge, the situation can be judged only on the basis of experience and current information.

#### Facts to Consider

Some of the facts to consider are these.

Farmers in 1945 have more machinery and equipment in total than ever before, including more units of horsepower. Some of this equipment is becoming less and less efficient and would normally have been replaced before now. However, it went a long way last year in many places to help overcome the effects of extremely unfavorable planting weather. This does not prove that additional equipment is not needed but it does prove that not every tight squeeze spells disaster.

The 1945 acreage goals aggregate only 3 percent larger than last year's total planted acreage. Increases are called for in flaxseed, sugar beets, cover crop seeds, dry beans, potatoes and tobacco, but each of these crops has been produced on a larger scale in the past than the goal calls for this year.

Considered in relation to the fact that the 1945 goals were determined in each State by people familiar with

1944 and 1945 Production of Important Farm Equipment for Domestic Use

Equipment groups	1944 <sup>1</sup> percent of 1940 output	1945 <sup>2</sup> percent of 1940 output
Tractors for farm use .....	85	70
Tillage, planting, cultivating, fertilizing, spraying equipment .....	60	100
Harvesting and haying equipment .....	155	145
Wagons and nonmotor trucks .....	100	90
Dairy, poultry, barn equip- ment .....	120	115
Pumps .....	100	100

<sup>1</sup> Actual total production in year beginning July 1, 1943.

<sup>2</sup> Scheduled production in year beginning July 1, 1944.

local conditions, this indicates that specialized equipment for these crops is fairly adequate. In the areas where both flaxseed and wheat are grown, more large-scale machinery is needed. In the sugar beet areas, the shortage of manpower will press heavily on available equipment. Each area will have particular problems, aggravated or relieved by the weather. In the past it has sometimes been possible to get approval for supplemental farm machinery programs after the regular program has been approved and after new problems have arisen. This year, however, supplemental programs submitted by the War Food Administration have not been approved because of their competition with large military requirements which have first call on supplies of material and manpower.

#### Prospects for Other Supplies

As to other farm production supplies:

1. Rotenone, pyrethrum, and nicotine will be in short supply. It will be necessary again to substitute one chemical for another in the protection of crops against pests. Vigilance for infestations and prompt use of control measures are especially recommended.

2. Fertilizer supplies, in total, will about equal those of last year, but there will be a smaller tonnage of approved grades with a high nitrogen

content and a smaller tonnage of superphosphate for direct applications. Approved grades high in potash should be more abundant.

3. Textiles used in production will be in short supply.

4. Conservation and reuse provide the only hope of having enough wood-

en containers and agricultural bags. Farmers are urged to sell unneeded used bags to local dealers. Growers of crops marketed in wooden containers should place orders early for second hand containers.

FREDERIC B. NORTHRUP, *Director  
Office of Materials and Facilities, WFA*

## Farm Labor: Problems and Programs

AS THE American farmer closed the books on 1944—a year in which he achieved an all-time high in combined crop and livestock production with the smallest work force on record—he found himself challenged to “do it again” in 1945 in the face of a further manpower drain.

### Byrnes Announcement

Early in January this year, Justice Byrnes, the War Mobilization Director, announced it would be necessary to induct at least a portion of the 364,000 occupationally deferred farm men in the age group 18 through 25 to meet the manpower requirements of the armed forces. Justice Byrnes, in a letter to the National Selective Service Director which he made public, said President Roosevelt had found “that the further deferment of all men now deferred in the 18 through 25 age group because of agricultural occupation is not as essential to the best interests of our war effort as is the urgent and more essential need of the Army and Navy for young men. The President feels in view of existing conditions, agriculture, like our other war industries can, with few exceptions, be carried on by those in the older age groups.”

Carrying out this directive, the Selective Service Director asked the Nation's draft boards to call up the men in this group for pre-induction physical examinations and review their deferments. In view of the Tydings Amendment to the Selective Service Act, just how many of these young farm operators and full-time workers

will be taken for the armed forces as a result of this review cannot now be estimated with any accuracy. Selective Service officials expect that at least 40 percent will not pass the physical. That has been their experience with other men in this age range. As for those who do, certainly a substantial number still warrant agricultural deferment.

### Effect Not Critical

The Tydings Amendment provides that any registrant found by his local board to be necessary to and regularly engaged in an agricultural occupation or endeavor essential to the war effort shall be deferred until such time as a satisfactory replacement can be obtained. It is agreed by all concerned that if a farmer is not contributing in a substantial way to agricultural production, or if he can satisfactorily be replaced, then he should not have occupational deferment. The War Food Administrator no doubt had this point in mind when he told Justice Byrnes that the induction of the younger farmers and farm hands, *who do not clearly fall within the scope of the Tydings Amendment*, should not result in a critical condition so far as food and fiber production is concerned.

It is felt that agriculture should not undergo any further wholesale loss of manpower if the 1944 level of agricultural production is to be sustained or increased. The farm population has decreased since 1940 by nearly 5 million, or 16 percent. About 1,200,000 farm men—operators and workers—have gone into the armed services.

This number increases to 1,650,000 with the inclusion of young men who, prior to entering the services, were living on farms but working at non-agricultural occupations or attending school. In addition, about 2,500,000 men and women have transferred from farms to industry during the war.

According to employment estimates of the Bureau of Agricultural Economics, the average annual farm employment for 1944 was 10,037,000, compared with 10,585,000 for 1940, a reduction of 5 percent. In a breakdown of these estimates, BAE shows that operators and unpaid family workers in 1944 averaged 7,810,000, 3 percent under the 1940 average, while the average of 2,227,000 for hired workers last year was 13 percent below the 1940 average.

### War Impact Severe

The war's impact on the farm work force has been severe from a qualitative as well as quantitative standpoint. Along with the numerical decline there has been a loss of stamina and skill as a result of the drastic change in the composition of the labor supply. Male operators and workers who have left agriculture for the armed services or industry have had to be replaced largely by women, youth, and retired men returning to active farm life for the emergency. They have not, for the most part, had the stamina and skill of the men whose places they took.

Yet output per worker in agriculture has increased. The various factors accounting for this have been (1) generally favorable weather conditions; (2) built-up plant energy resulting from a decade of soil conservation which has contributed to larger yields; (3) greater use of improved varieties of seed, high analysis fertilizers, and other more effective methods of cultivation; (4) increased mechanization—there are 29 percent more mechanical corn pickers, 23 percent more combine harvesters, 49 percent more milking machines on farms today than in December

1941; (5) longer hours of work; (6) greater diligence by the farmer in planning his work and supervising the labor provided him through the emergency farm labor program; (7) the rapid and intelligent shifting of farm workers, made possible by the emergency farm labor program, from one crop area to another as new needs develop, thus drastically reducing time lost by hired workers seeking jobs; (8) the stimulation to production of farm prices which were 15 percent above parity in 1944 and of farm wages which were 150 percent higher in 1944 than in 1940.

It all added up to an increase in output per worker last year of 28 percent over 1940 and 45 percent over the 1935-39 average.

The principal increases in labor requirements necessitated by the 1945 goals are in sugar beets, sugarcane, tobacco, flaxseed, truck crops for processing, potatoes, and cover crop seeds. Except for flaxseed, these crops require large amounts of hand labor in planting, cultivating and harvesting operations. The increase in sugar-beet acreage alone will require 25,000 additional able-bodied workers, and sugar-beet production is confined almost wholly to labor deficit areas.

Acreage increases in sugarcane, tobacco and truck crops for processing called for in the goals will require 786,000, 4,700,000 and 1,350,000 additional man-days, respectively.

### Early Victory Little Help

Even an early termination of the war in Europe would not ease materially the farm labor situation this year. Because of the many problems involved in demobilization, and the need for experienced troops in the Pacific theater, not many men could be returned from the armed forces to the farms in time to help with the 1945 crop. Industry's manpower requirements are expected to remain high throughout the year. Partial reconversion of war industries in 1945 would make some workers available to agriculture, but in limited numbers only.



The experiences of the First World War are conclusive in their indication of a tight labor market continuing in agriculture even after the war. As late as August 12, 1920, the Department of Labor, analyzing the agricultural labor problem at that time and considering the further importation of Mexican Nationals, observed:

"It is a generally accepted fact that upon the signing of the armistice and returning to this country of the vast army sent abroad and its demobilization, the men demobilized did not generally return to the vocations in which they were engaged at the time they were called upon to perform military service. In fact, the authorities claim that there has been a general reluctance upon the part of farm laborers to return to the farm."

#### Intensive Local Recruiting

Going into the 1945 season, all facts concerning the farm manpower outlook point to the need for recruiting of labor locally by State and county extension service personnel on a more intensive scale even than last year, and supplementing local labor supplies where necessary with foreign workers, prisoners of war, and American farm workers able and willing to travel at their own expense or at the employers' or Government's expense.

The State Extension Services reported that through 12,000 local farm placement offices, 3,000,000 different individual workers were placed on farm jobs during 1944. Thousands of other workers, stimulated to seek farm jobs as a result of United States Crop Corps appeals through the press and radio, made their own arrangements with farmers.

The United States Crop Corps goal for 1945 is for the recruitment of 4,-

000,000 people, mainly women and youth, to assist the regular farm work force on a full- or part-time basis. This goal is the same as last year.

#### More Foreign Workers

Just as more foreign workers were required to meet labor needs in 1944 than in 1943, the trend will continue in 1945. Last year the War Food Administration's Office of Labor supplied a total of 107,636 foreign workers, including the 23,046 who were in the country at the start of the year, and transported 11,322 workers of this country interstate. The largest number of foreign workers employed at any one time was 94,649, which was at the height of the work season last fall. They consisted of 67,860 Mexicans, 17,437 Jamaicans, 5,653 Bahamians, 908 Barbadians, 1,301 Newfoundlanders, and 1,490 Canadians. Foreign and interstate workers were supplied to 41 States.

In 1945 the Office of Labor plans to supply a somewhat larger number of foreign workers. At the peak of the season it expects to have 105,500 available—75,000 Mexicans, 24,000 Jamaicans and 6,500 Bahamians. Interstate transportation of workers will also have to be increased.

The War Department estimates that it can make available to agriculture throughout 1945 prisoners of war in about the same numbers as were employed on farm jobs in the fall of 1944. This means that about 50,000 prisoners of war will be available for relatively long periods of employment and can be increased to about 75,000 for short periods for harvest of perishable crops.

GEORGE W. HILL  
Office of Labor, WFA

INDEX—A limited number of copies of the index of the articles appearing in the *Agricultural Situation* during 1944 are available from the Bureau of Agricultural Economics, Washington 25, D. C.

# Prospective Crop Yields in 1945

**C**ROP yields per acre in 1944 were 9 percent higher than in any previous year except 1942, an exceptionally favorable season, and were nearly 33 percent above the 1923-32 pre-drought period. After allowing for the weather, crop yields have been increasing at the rate of nearly 1 percent a year for the past 20 years. If this trend continues in post-war years farmers will need to plan either for larger market outlets or for fewer acres. Hence the problem of future yields is of major importance to farmers everywhere.

## Factors Affecting Yields

Yields of crops not yet planted cannot be accurately forecast because future weather is not known. But it is possible to separate out some of the factors that have determined crop yields in past years and figure what yields per acre may be expected either during a period of years or in individual years when weather is about as favorable for crops as the average of past seasons. For the 1945 season allowance can also be made for such recent developments as (1) the excellent start of the winter wheat sown last fall, (2) the above-average reserve of subsoil moisture in most of the western half of the country except the Pacific Northwest, (3) the near-record supply of fertilizers being produced, (4) the cumulative effects of the heavy applications of lime in the East and Northeast, (5) the large acreage that will be planted to hybrid corn and to improved varieties of oats, wheat, soybeans, potatoes, sugar cane, sugar beets, beans, and other crops, (6) a continuation of the wartime tendency toward close utilization of the most productive land, and (7) price supports which go far toward offsetting the shortage of labor and encourage the complete harvesting of the crops produced.

A crop-by-crop allowance for the effects of these factors as well as weather

indicate that with average growing conditions during 1945, the average of crop yields should be nearly 26 percent higher than during the 1923-32 pre-drought period. To average that high, yields would need to be higher than those in any past years except 1942 and 1944. These prospects will, of course, change from month to month as the season advances.

During the past 35 years weather during the growing period has caused the aggregate of crop yields per acre harvested to differ an average of about 6 percent from what would have seemed fair appraisals of prospects at the beginning of each season. Prospects for individual crops and for local areas have changed much more than this, but until the widespread droughts of the 1930-39 decade, weather was not often seriously unfavorable for more than a few crops in any one season. Furthermore, until the present war period, weather very favorable for high yields tended to so reduce prices that the harvesting of some crops was incomplete, with damaged hay, nubbins, small potatoes and apples and even some scrap cotton being left in the fields.

This year moisture reserves, price stability, liberal use of fertilizers, and organized assistance to help farmers meet critical situations combine to reduce somewhat the danger of severe crop reverses but it would still be best to be prepared for about the usual variation in crop prospects as the season advances.

## Yields Increasing Steadily

The reasonableness of forecasts made at this season can best be judged by reviewing prospects for each part of the country and for each crop in comparison with past years. All such analyses, however, should be accepted with certain reservations for, although each year brings a new combination of weather conditions, it is possible to judge what to expect only from what

has happened in the limited number of years with adequate records. In allowing for variations in the weather of past years it becomes apparent that during the last 20 years crop yields per acre have been rising at the rate of nearly 1 percent per year. Excluding the particularly rapid increases in yields of fruits and cotton, yields are now about 13 percent higher than they were in comparable seasons 20 years ago. Wartime prices and conditions are accentuating this upward trend regardless of the weather, and in addition, yields in the last few years have been helped by favorable weather.

### Great Plains States

The effects of variation in the rainfall on national crop yields have been most important in the Great Plains States. This is a group of 10 States extending from North Dakota and Montana southward through Texas and New Mexico. In these States, which have 40 percent of the national acreage, crop yields in past years have been roughly proportional to a "moisture supply" measured by rainfall during a "crop year" extending from the previous September through August, plus some allowance for variation in the amount of subsoil moisture carried over from one season to the next and for the adverse effect of hot weather during the summer months. In the last few years there have been signs that the increased use of hybrid corn, rust resistant wheats and other factors may have helped to cause the recent increases in yields, but the exact extent is uncertain because these States, as a group, seem to have had more rain during the last 4 crop years than in any previous 4-year period during the last half century.

In the Plains States the effects of drought and of wet weather tend to be cumulative. Ordinarily 3 inches of extra rainfall in one crop year helps crops of the following season about as much as one extra inch of current rainfall. Moisture remaining in the soil and subsoil from the abundant rainfall

of 1944 and other recent years raises prospects for 1945 at least 5 percent, and possibly 6 or 8 percent, over what they would otherwise be. Allowing for the effects of hybrid corn and other recent developments, aggregate crop yields 12 percent above the 1923-32 average would seem about what should be expected with usual weather.

For rough calculations it may be assumed that aggregate crop prospects in this area will rise or fall about 4 percent for each inch that the rainfall in the area after January 1 is above or below normal. Within limits, cool weather during the summer is usually beneficial, the gain from summer temperatures that average 1° below normal being about as great as those from an extra inch of rain, with corresponding damage from hot weather. Yields of individual crops depend much more on the distribution of the rainfall. Present moisture reserves appear particularly important for small grains and hay. Corn and sorghums will need rain later in the season. Cotton has rules of its own, being benefited by adequate moisture in the western parts of the Cotton Belt and easily hurt by too much rain farther east.

### Other States

In the northern States east of the Great Plains and also in the 7 States west of the Rockies assuming average weather, composite yields of field crops should about equal those of 1944, but in individual States yields may differ materially from those of 1944. Parts of the Ohio Valley suffered considerably from the summer drought last year, but the weather was better than average in Wisconsin and west of the Mississippi River. In the far West prospects now appear favorable in California and the Southwest but in Washington, Oregon, and parts of Idaho there is a growing fear of reduced yields unless precipitation after January 1 is enough above normal to restore depleted reserves of soil moisture and improve water prospects for irrigation. In the South, east of

Texas and Oklahoma, the item of major importance is the prospect that the quantity of fertilizer used will continue at a record, or near-record level. There seems no reason to expect the yields of cotton and small grains to approach the exceptionally high yields of last season, but, with average weather, yields of most other field crops should show some improvement over 1944.

### Crop-by-Crop Appraisal

A more accurate appraisal of prospects this season can be made by reviewing the record for each crop separately. By using the reported condition of each crop at harvest time, it is possible to adjust the yields each year to show what they would have been with average weather. The year-to-year changes due to such developments as hybrid corn, liberal use of fertilizers, and shifts to irrigated land or high-yielding areas can then be seen. This method shows that under present conditions the trend of crop yields is strongly upward.

Now that most of the high-yielding corn areas have shifted almost entirely to the use of hybrid seed and the South has stepped up the quantity of fertilizer used, the most probable yield of corn in the United States in 1945 appears to be about 32 bushels per acre, which would be above the yield in any season from 1866 through 1941. With an acreage equal to that harvested in 1944 such a yield would result in a near-

record crop of more than 3 billion bushels.

With the December estimates of winter wheat indicating a large acreage, prospects for light abandonment and a yield of 16.7 bushels per acre harvested, and with favorable subsoil moisture in most of the spring wheat sections except nonirrigated lands in the Pacific Northwest, it seems reasonable to expect another billion bushel wheat crop and a yield per acre of about 16 bushels for all wheat.

Some varieties of oats have been giving wonderful yields in Northern States and new winter oats have been successful in the South. As a result the United States average yield of oats in 1944 was nearly 30 bushels even though planting was seriously delayed in some of the principal producing States. Pending further information regarding acreage changes, the 1945 yield seems likely to be about 32 bushels. Barley prospects continue unchanged at about 23 bushels.

### Good Hay Yield

The yield of hay seems to be rising. In the Great Plains States both tame and wild hay crops should have a good early start. In the Northern States farther east the yield of hay crops has been rising for many years, chiefly because of a shift towards the heavier yielding kinds. Yields should be given a further boost by the huge quantities of lime applied in the last few years, but will continue to depend largely on

Past and 1915 Prospective Crop Yields per Harvested Acre, U. S. Average

	All corn	All wheat	Oats	Barley	Tame hay	Cot- ton	Soy- beans	Dry beans	Pota- toes	To- bacco	23 crops (per- cent of 1923-32 average) <sup>1</sup>
	Bu.	Bu.	Bu.	Bu.	Tons	Lb.	Bu.	Lb.	Bu.	Lb.	Pct.
1880-99.....	25.9	13.4	27.5	23.7	1.25	182	-----	-----	82.5	732	-----
1900-19.....	26.6	14.3	29.9	23.2	1.31	185	-----	-----	96	818	-----
1920-29.....	26.8	14.6	29.7	22.7	1.31	182	-----	665	111	772	100.6
1930-36.....	21.4	12.1	26.1	19.9	1.19	187	14.6	729	108	806	94.2
1937-41.....	28.9	14.6	31.6	23.3	1.39	246	18.7	917	126	941	117.7
1942.....	35.2	19.8	35.6	25.5	1.53	272	18.7	987	137	1,023	136.2
1943.....	32.1	16.6	29.6	21.9	1.43	254	18.1	870	146	966	124.1
1944.....	33.2	18.2	29.9	23.0	1.41	265	18.4	784	130	1,072	132.7
Prospective 1945 <sup>2</sup> ..	32.0	16.1	32.0	23.0	1.40	265	18.4	855	133	1,010	126.9

<sup>1</sup> Crops included in the average, in addition to the 10 listed in the table, are sorghums for grain, rye, flaxseed, rice, wild hay, peanuts, sweetpotatoes, sugar beets, apples, 3 citrus fruits as a group, and 6 other fruits as a group.

<sup>2</sup> Indications in January 1945. Actual yields can be expected to be higher or lower to the extent that subsequent weather conditions are more favorable or less favorable than average.

adequate moisture during the spring and summer months. In the South the large acreage of peanut vines saved for hay in the last few years has tended to reduce the average yield of hay per acre even though the total tonnage has been high. When prospects for all States are lined up, a hay yield per acre nearly equal to last year's 1.41 tons seems probable.

The yield of cotton last year, according to the December estimates, was 295 pounds per acre or 23 pounds higher than in any previous year. With plantings limited to the more productive land, a "good season in the ground" in Texas and Oklahoma, prospects for near-record fertilizer applications farther east, and continued improvement in methods of production it seems best to prepare for a yield of about 265 pounds this year. This would be above the yield in any year prior to 1937.

Tobacco will continue to be well fertilized in 1945 and a yield of 1,010 pounds, about the average during the last 5 years, seems about what should be expected even though this yield was never reached prior to 1940.

### **Big Potato Yield**

Potato yields have been rising about a bushel per year for 50 years and the present trend seems even more strongly upward. Productive new varieties are being planted more and the certified seed supply of record volume is sufficient to plant about 70 percent of the acreage. The tendency is toward liberal fertilization and further concentration of the acreage in the high-yielding commercial areas. The most probable yield would seem to be about 133 bushels although that mark has been exceeded only twice. Methods of growing sweetpotatoes have been improved in some commercial areas but the bulk of the crop is still grown in small patches and there seems no reason to expect any material departure from the usual average of about 87 bushels.

Such shifts of soybean acreage as now seem probable are mostly toward the high-yielding States and a yield about the same as that of 1944 seems probable. Wartime efforts to increase the production of beans and peanuts have resulted in increased acreages in some areas where average yields are less than half the national average. Preliminary estimates of the probable distribution of the acreage this season indicate the most probable yield to be 855 pounds of beans and 675 pounds of peanuts.

Yields of flaxseed and rice have been less seriously affected by acreage shifts but 8.2 bushels of flaxseed and 48 bushels of rice would seem all that should be expected.

### **Lower Sorghum Yield**

Sorghums harvested for grain yielded nearly 20 bushels per acre in 1944 and have averaged 18 bushels during the last 4 years even though the acreage has been nearly doubled since 1939. Allowing for the probability of less abundant rainfall a somewhat lower yield should be expected this season.

In 1944 apples, other deciduous tree and vine fruits as a group, and citrus fruits gave record, or near-record, production per acre of trees in bearing. The tendency of some varieties of apples to bear heavily in alternate years will probably reduce production of apples this year, but most commercial orchards, vineyards and groves are being well taken care of. Barring unusual losses from freezes and hurricanes, this year's yields per acre of these three groups should average nearly as high as in 1944 and more than 40 percent higher than in the base years 1923-32.

Putting these yields together in proportion to the relative importance of these crops during the 1923-32 or predrought period, they show that 1945 yields are likely to average about a fourth higher than during that decade. But more than 40 percent of

the total expected gain results from the big change in the yield of cotton and 27 percent from improvement in corn. Yields of small grains and hay crops are expected to show general, but moderate, increases that account

for about 12 percent of the total gain. Fruits account for about 10 percent of the gain and tobacco and potatoes each about 4 percent.

JOHN B. SHEPARD  
*Bureau of Agricultural Economics*

## Toward Standardized Cotton Production

THIS year nearly a fourth of the Nation's cotton farmers, who operate about a half of the total cotton acreage, will be members of organized groups known as one-variety cotton communities. These farmers will plant only the varieties of cotton seed best adapted to their localities and thus standardize production through the use of pure seed as essential to quality improvement. A further prerequisite of uniform quality cotton production is that the farmers in a given area patronize a gin which gins no other variety of cotton as a means of avoiding mixed seed and lint.

Among the far-reaching results of the standardization of cotton production on a community basis are the following: (1) In a far shorter time

NOTE.—This report is based largely on the investigations of C. B. Doyle and others of the Bureau of Plant Industry, Soils and Agricultural Engineering.

than formerly, the seed of any new variety found to have superior qualities can be multiplied sufficiently to meet the demand for it. Furthermore, large supplies of pure seed of the older varieties of cotton are always available in one-variety communities. (2) Experience has shown that improvements in culture, harvesting, ginning, and marketing are more easily and effectively applied where production is on a one-variety basis. (3) Cotton manufacturers are recognizing to an increasing extent the greater uniformity and superior quality of cotton from one-variety communities, and many mills regularly buy cotton from communities which can supply them with sizeable lots of cotton of specific varieties.

By way of further summing up the achievements of the one-variety community work, the Assistant Research Administrator of the Department of

Cotton Growing in Standardized One-Variety Communities, United States, 1935-43

Year	Counties participating <sup>1</sup>		Communities participating	Grower members	Acres of adopted variety		Production of adopted variety	
	Actual	Percent of all cotton counties			Actual	Percent of U. S. total	Actual	Percent of U. S. total
	Number	Percent	Number	1,000	1,000	Percent	1,000	Percent
1935.....	181	19	331	-----	788	3	571	5
1936.....	234	28	511	-----	1,470	5	1,112	9
1937.....	312	38	730	-----	2,453	7	1,883	10
1938.....	425	53	1,056	-----	2,284	9	1,445	12
1939.....	495	62	1,516	132	2,987	12	1,656	14
1940.....	548	70	1,922	185	4,518	18	2,742	22
1941.....	550	71	2,116	229	6,239	27	3,367	32
1942.....	577	75	2,564	292	7,614	33	4,570	37
1943.....	589	77	2,544	306	8,869	40	4,771	43

<sup>1</sup> Counties containing one or more standardized one-variety communities.

Agriculture, in testifying before a Congressional Committee in early December, said: "The one-variety communities using recently developed varieties of superior quality are probably producing the best cotton in the world. Standardizing our entire production on a few of our best varieties is a logical future step."

The possibilities of one-variety production were first demonstrated in the irrigated valleys of the Southwestern States with American-Egyptian and Upland cottons. California has gone further than any other State by enacting a law in 1925 which restricts the planting in specified areas to a single variety. In 1931 the Bureau of Plant Industry, Soils, and Agricultural Engineering, in cooperation with the State Extension Services and other State and Federal agencies, inaugurated a one-variety program in all principal States of the main Cotton Belt.

Now beginning its fifteenth year of operation, the one-variety program has been outstandingly successful, with its growth from year-to-year consistent

though not spectacular. Consequently, in 1943 there were a total of 2,544 standardized one-variety communities in 77 percent of the cotton-producing counties of the country with a cooperating membership of about 306,000 growers. The acreage planted to the approved varieties on these farms was 40 percent of the total acreage and 43 percent of the total production for the entire country.

The extra cash return received by the growers in the one-variety communities in 1943 from larger yields and premiums for improved quality of staple has been estimated by the Bureau of Plant Industry, Soils, and Agricultural Engineering at nearly \$7.50 an acre over and above what they would have received if they had continued to plant the inferior varieties formerly grown. This represents a total additional income for the one-variety farmers of more than 66 million dollars in that single year.

HORACE G. PORTER  
*Bureau of Agricultural Economics*

## Victory Gardens for 1945

FOR the last 3 years the people of the United States have made a remarkable record of food production in their back-yard and community Victory gardens. It now seems certain that this production will be needed again in 1945.

A few months ago there was some question in the minds of many concerning the need for a Nation-wide Victory garden program this year. That was before the big push by the Germans. It is now possible to see more clearly the importance of home gardens in relation to our total food needs. For instance, based on present allocations, civilians will have to get along with about 10 to 15 percent less

commercially canned vegetables than a year ago. Half the canned vegetables available to United States civilians from now until the 1945 pack is ready will have to come from home-canned supplies. With no immediate end of the war in sight, the War Food Administration is suggesting that everyone who had a garden last year stay on the job.

Victory gardening has appealed to many people for many reasons. Perhaps the greatest appeal has been the satisfaction that comes from a feeling of direct participation in the country's war food production program. Victory gardening has been called war work, and it is. But aside from this,

many people will faithfully tend their gardens this year because they have learned from experience how many blue points they can save. Others will garden because they like the taste of vegetables when they are garden fresh. Still others will garden for the simple reason that they like it.

The best estimate of the number of home gardens in 1944 is 18½ million. This estimate was provided by a survey made by the Bureau of Agricultural Economics in September and October. Private polls estimated about 19½ million gardens for 1943, and about 16½ million gardens for 1942. Although no accurate statistics are available on production, it has been estimated that 40 percent of the vegetables grown for fresh consumption last year came from home gardens. This, of course, includes farm gardens.

### Garden Equipment Outlook

In general the outlook is good for Victory-garden equipment this year. Weather was favorable last year in areas where vegetable seeds are grown commercially and yields were good. In spite of the ample supplies of seed, gardeners are being advised to place their orders early because the shortage of help in seed stores makes it impossible to fill orders promptly if too many people wait until planting time.

Victory gardeners should have little difficulty in getting fertilizers this year. The same grades used last year in various parts of the country will be sold again this year. For the Atlantic Seaboard the formula will be 5-10-5; the central part of the country will be 4-12-4; and for the Mountain and Pacific States it will be 6-10-4.

The latest word on insecticides is that supplies will be about the same as a year ago. Rotenone, one of the most popular garden insecticides used for dusting, will be available in about the same quantity. Those who buy early will get the rotenone. Those who wait until the insects are already at work in the gardens may have to use cryolite instead.

The situation on tools hasn't changed materially from last year. Most of the stores will have only the victory models. For small gardens few tools are needed. But those who have to buy new tools should be able to find them, although they may have to shop around a bit.

### Getting More From Gardens

Most of the gardeners this year will have had at least two years of experience. They can be expected, therefore, to do a better job in choosing a site, preparing the ground, and taking care of the garden generally. For the last 2 years many gardens throughout the eastern and central parts of the country were badly damaged by drought. This year more effort will be made to locate gardens close to water supplies, and where this is impossible, more attention will be given to building up the supply of organic matter in the soil and to the use of mulches. Both practices help to carry a garden through a drought.

Garden veterans will also do a better job of fighting weeds and controlling insects. They have learned—sometimes against their own judgment—that most garden crops simply have to be thinned. Although a few have learned the art of keeping the garden planted throughout the growing season, the great majority have not yet learned this lesson. Over most of the country good fall gardens are the exception rather than the rule.

Plans for carrying on the Victory garden program in 1945 will be much the same as in the last 2 years. To promote gardening national advertisers will again donate space in newspapers and magazines as well as time on the radio. A kit of garden information aids has been sent to each of 7,500 community garden leaders throughout the country. State and county extension workers will continue to give much of their time in assisting gardeners and home canners.

E. G. MOORE, *Manager  
Victory Garden Program*



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All live stock
1935.....	87	86	117	125	130	103	114	116	116	115
1936.....	103	100	118	124	127	111	125	114	118	120
1937.....	113	117	126	131	133	126	130	110	132	127
1938.....	99	91	115	123	126	125	114	108	115	113
1939.....	109	105	113	121	124	123	110	96	112	103
1940.....	125	119	115	122	125	126	119	96	111	112
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	235	144	132	150	201	162	151	188	173
1943.....	239	305	151	167	162	264	193	160	200	200
1944.....	235	310	152	176	170	315	198	174	200	194
1944-January.....	243	319	151	174	168	275	201	177	194	193
February.....	244	321	161	175	169	-----	201	168	199	194
March.....	211	318	152	175	169	-----	199	162	203	194
April.....	239	313	162	175	169	292	196	151	203	191
May.....	237	313	152	175	169	-----	194	153	201	190
June.....	235	313	152	176	170	-----	192	154	200	189
July.....	231	306	152	176	170	328	194	165	197	190
August.....	232	310	152	176	170	-----	196	171	201	194
September.....	231	307	152	176	170	-----	188	179	200	198
October.....	232	306	152	176	170	325	201	190	201	199
November.....	232	304	152	177	171	-----	203	207	200	202
December.....	232	-----	153	173	171	-----	203	211	198	202
1945-January.....	-----	-----	-----	179	172	324	202	199	203	202

Index of prices received by farmers (August 1909-July 1914=100)										Parity ratio <sup>4</sup>
Year and month	Crops								All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	108	102	105	95	112	82	104	107	114	90
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	170	67	88	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	98	73	111	88	100	80
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	160	190	179	245	183	192	119
1944.....	165	166	354	164	209	215	212	194	195	115
1944-January.....	170	168	350	162	203	204	267	199	196	117
February.....	170	169	345	161	205	206	247	196	195	115
March.....	169	171	351	161	207	215	242	198	196	116
April.....	171	172	352	163	207	237	220	200	196	116
May.....	170	173	350	160	208	232	225	198	194	115
June.....	165	170	350	163	210	228	231	197	193	114
July.....	161	168	350	164	209	230	195	194	192	113
August.....	156	166	355	162	208	214	186	191	193	114
September.....	155	162	358	170	207	206	166	188	192	113
October.....	164	161	357	171	211	205	153	187	194	114
November.....	165	157	368	168	215	195	188	189	196	115
December.....	167	160	364	168	215	206	228	196	200	117
1945-January.....	169	163	365	163	214	205	262	200	201	117

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised March 1943.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

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# THE AGRICULTURAL • SITUATION •

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**D**ESPITE a 14 percent decline during 1944 from the all-time high in the number of grain-consuming animal units—one of the largest declines in history—the number of units on January 1, 1945, was the third largest on record. Hog, chicken, and sheep numbers were reduced considerably, while cattle, horse and mule numbers declined moderately. By the end of 1945, hog, chicken and milk cow numbers will probably not be changed a great deal, but a further decrease is in prospect for the number of beef cattle, sheep, horses and mules. In contrast to a year ago, these reduced numbers plus large feed supplies will permit liberal livestock feeding in most areas until 1945 harvest of feed crops. \* \* \* Estimates of 1944 cash receipts from marketings of crops—livestock not included—are now placed at 8.6 billion dollars, 8 percent above 1943. Greatest increases over 1943 were in the South Atlantic and South Central States. \* \* \* Government actions in late February are designed to relieve the critical shortage of low- and medium-priced cotton clothing and household cotton goods. \* \* \* Because of strong demand, prices received by farmers for eggs are expected to continue above last year for the next few months.

# The 1945 Census of Agriculture

**U**NDER way since mid-January, this year's agricultural census is moving toward completion, with the first of the preliminary reports announcing the number of farms and acreage, by counties, expected to be released shortly. These reports are of especial interest to county agents and crop reporters who will find the information in them useful in connection with their work.

Before their publication, the preliminary census totals for each county are reviewed by a county advisory committee composed usually of the county agent and AAA committee members.

Such a committee has been established in practically every one of the 3,000-odd counties in the United States through the cooperation of the Extension Service of the Department of Agriculture. Crop reporters also are particularly interested because many of their number are presently employed as census enumerators. Because of their experience as crop reporters, the Census Bureau has commended the quality of their work and was eager to have their assistance. The Bureau is indeed grateful for the cooperation of crop reporters, especially in these trying days, for their help in counting noses, so to speak.

Under provisions of United States Code, Title 13, Section 216, the taking of the 1945 Census of Agriculture is mandatory. This law was passed by the 71st Congress and was approved by President Herbert Hoover on June 18, 1929. The taking of the mid-decennial farm census in 1945 is no new undertaking introduced into the succession of agricultural censuses which has been established. The first mid-decennial farm census was conducted in 1925 during the administration of President Calvin Coolidge.

The first United States Census of Agriculture was conducted in 1840 and continued at 10-year intervals

until 1920, thereafter at 5-year intervals. The interval between farm censuses was halved after the 1920 census in order to provide a more frequent basis of reference for annual estimates made by the Department of Agriculture and other agencies concerned with agricultural statistics.

There are many ways in which farmers, industry, and Government can use the information obtained in the agricultural census. For example, here are just a few ways farmers and other agricultural leaders will benefit: They will use it as a guide in planning acreage changes in particular crops and in classes of livestock, and for studying markets; a basis for making credit and other business transactions; and as an instrument to formulate policies. These benefits will be enhanced because the census is the only source where localized statistics in detail may be obtained. Crop reporters will be especially interested in this year's census as it will show in detail for the first time since the war started, the changes that have taken place in crops, production, yields, acreage, and many equally important items.

Industry likewise will benefit. It will use the census for measuring the supplies of raw materials, for determining the market for manufactured products, for determining trends and effect of new developments, and for guiding day to day decisions. Government agencies such as the Farm Credit Administration or Soil Conservation Service, will use the census as a basis for their planning and operations.

Equally important is the use that will be made of the agricultural census to prosecute the war. Need for production and distribution of food is assuming greater emphasis in the war economy. The availability of food may be a big factor in determining the future of the course of the war, especially as the number of men in the

armed forces increases overseas, and as more occupied territory is taken over by the United Nations. Accurate and up-to-date statistics on food supplies, transportation, and other information being taken in the 1945 agricultural census will enable agriculture, industry, and Government to provide more efficient methods to meet the

needs of the armed forces and United Nations.

Moreover, up-to-date agricultural statistics will be of fundamental importance in planning the reconversion of agriculture and industry from a wartime to a peacetime economy.

JAMES C. CAPT. *Director  
Bureau of the Census*

## Commodity Reviews

### LIVESTOCK

**L**IVESTOCK numbers decreased sharply in 1944 after reaching a record high at the beginning of 1944. The number of all species of meat animals, as well as of horses, mules, chickens, and turkeys was lower on January 1, 1945 than a year earlier. Reductions were greatest in hog, chicken, and sheep numbers. Horse and mule numbers continued the declining trend begun soon after World War I. Cattle numbers were only slightly reduced during the year.

The strong demand for meat and other livestock and poultry products from the beginning of 1938 through 1943 caused a marked increase in total livestock numbers. By early 1944 livestock numbers had reached such a high level stocks of feed grains, accumulated in 1937-41, had largely been depleted so that supplies were relatively short. During 1944 the hog-corn and egg-feed price ratios were below average for most of the year and were much lower than in the preceding 2 years.

In view of the reduced livestock numbers together with the large grain harvest in 1944, feed-grain supplies until the 1945 harvest are adequate to meet all requirements for liberal livestock feeding and still leave a carry-over larger than at the end of the 1943-44 crop year.

Numbers of hogs, chickens, and milk cows probably will not be mate-

rially changed by the end of 1945. But a further decrease in the number of cattle other than milk cows, sheep, horses, and mules is in prospect.

At the first of this year there were an estimated 60.7 million hogs on farms, a decline of 28 percent from the record number on hand at the beginning of 1944. This marked reduction in number was foreseen early in 1944 when the spring pig crop was reduced 25 percent below the record crop of a year earlier, and when the fall pig crop was 34 percent smaller than the record fall crop of 1943. The sharp reduction in the number of pigs raised in 1944 was brought about by the most unfavorable ratio of hogs prices to feed grain prices during the year since the beginning of the war and the short supply of corn for feeding hogs before the record 1944 corn crop was harvested.

A record slaughter of cattle in 1944 decreased cattle numbers only about

Number of Livestock on Farms, January 1, 1935-39 average and 1943 to 1945

Item	1935-39 average	1943	1944	1945
Thousand head				
Milk cows.....	24,989	27,106	27,656	27,785
Other cattle.....	41,815	52,003	54,708	53,975
Hogs.....	43,932	73,736	83,852	60,660
Sheep.....	51,344	55,775	51,769	47,945
Horses.....	11,285	9,675	9,302	8,897
Mules.....	4,465	3,704	3,531	3,408
Chickens.....	405,108	540,798	576,441	511,130
Turkeys.....	6,035	6,704	7,572	7,491

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
1935-39 average.....	107	128	84
1940.....	109	125	80
1941.....	124	132	94
1942.....	159	150	106
1943.....	192	162	119
1944.....	195	170	115
1944			
February.....	195	169	115
March.....	196	169	116
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

1 percent during the year. An estimated 81.8 million head of cattle and calves were on farms at the beginning of 1945, as against 82.4 at the beginning of 1944. While the number of calves and young dairy stock decreased slightly during the year, the number of cattle of all other classes increased. The number of milk cows increased about  $\frac{1}{2}$  percent to set a new all-time high of 27.8 million head, almost 3 million greater than the average for 1935-39.

One of the sharpest declines in calf numbers on record occurred in 1944. While the number of calves was reduced about  $1\frac{1}{2}$  million head, the number of cows and heifers, including milk stock, increased nearly three-quarters of a million head. Historically, after the peak in the cattle numbers cycle has been reached there is a period of several years of increased slaughter of cattle, especially a large slaughter of cows, heifers, and calves. Thus cattle slaughter in 1945 may be a record high.

The decline in sheep numbers begun

in 1942 continued at an increased rate during 1944, and was one of the largest decreases in numbers for any year in this century. The January 1, 1945 total number of sheep on hand, including sheep and lambs on feed of 47.9 million head, was a decrease of 3.8 million or 7 percent from a year earlier. The number of sheep and lambs on feed at the beginning of the year was up about  $1\frac{1}{2}$  percent from a year earlier. The number of stock sheep and lambs decreased almost 9 percent, from 45.2 to 41.3 million head, to the lowest level since 1928. The reduction in sheep numbers has been due largely to a short labor supply on ranches and farms and more profitable returns for labor utilized in the production of other crops and livestock. Present indications are the short labor supply situation will not be eased in 1945. Farmers and ranchmen saved a relatively small number of ewe lambs for herd replacements in 1944 and this tendency is likely to continue in 1945.

Both horse and mule numbers decreased in 1944, reflecting a small number of colts raised during the year and a relatively large rate of disappearance through death losses and slaughter. At the present rate of disappearance the number of horses and mules on farms in 1950 will be about 10 million head. Throughout the war period prices of horses and mules have been low relative to prices for meat animals and livestock products and this has tended to discourage the production of horse and mule colts.

## DAIRY PRODUCTS

MILK production on farms during the last quarter of 1944 at a seasonally adjusted annual rate of 120 billion pounds was an all-time record. Because of ample feed supplies and a continuation of the highest unit returns on record resulting in favorable milk-feed ratios, this high level of production is expected to continue during the next few months.

The dairy production payments announced by War Food Administration for the last three quarters of 1945 are designed to obtain proportionally more butter than last year. Production payments for butterfat are a little higher than last year while the payments on whole milk will be a little less. For the second and third quarters whole milk payments will average 25 and 35 cents a hundredweight less, but the fourth quarter will be about the same. Payments for the second half of 1945 are contingent upon Congressional approval.

Despite seasonal increases, creamery butter production is lagging behind last year, which has necessitated larger set asides than last year. About 40 and 55 percent of the April and May creamery butter output is required to be set aside for Government purchase. During the next few months civilian supplies of butter will be at a record low, while slightly more cheese will become available.

## POULTRY AND EGGS

THIS YEAR farmers intend to buy 4 percent fewer baby chicks than last year, but expect to grow 8 percent more turkeys, according to their February 1 intentions. Despite the usual differences between intentions and actual performance, which are dependent on what happens during the hatching season, the outlook for favorable egg and turkey prices and above average egg-feed and turkey-feed ratios indicate that farmers will probably carry out their intentions.

With 6 percent more turkey breeder hens on farms this past January 1 than a year earlier and with favorable conditions for turkey production, the 8 percent turkey increase is expected this year. Furthermore, military requirements for the coming year will probably be at least as large as in 1944, when the total demand for turkey meat exceeded the supply by a wide margin. Prices received by

### Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		February 15, 1944	January 15, 1945	February 15, 1945	Parity price, February 15, 1945
	August 1909- July 1914	January 1935- December, 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.46	1.46	1.47	1.62
Corn (bushel).....do.....	.642	.691	1.15	1.07	1.06	1.10
Oats (bushel).....do.....	.393	.340	.756	.721	.733	.686
Rice (bushel).....do.....	.13	.142	1.91	1.75	1.78	1.40
Cotton (pound).....cents..	12.4	10.34	19.93	20.20	19.99	21.33
Potatoes (bushel).....dollars..	.607	.717	1.30	1.58	1.65	1.25
Hay (ton).....do.....	11.57	8.87	15.90	17.10	17.70	20.40
Soybeans (bushel).....do.....	1.06	.954	1.85	2.06	2.10	1.65
Peanuts (pound).....cents..	4.8	3.55	7.33	8.14	8.14	8.26
Apples (bushel).....dollars..	.98	.90	2.04	2.46	2.58	1.65
Oranges, on tree, per box.....	1.81	1.11	1.51	1.98	2.25	1.03
Hogs (hundredweight).....do.....	7.27	8.38	12.90	13.50	14.00	12.60
Beef cattle (hundredweight).....do.....	5.42	6.58	11.60	11.70	12.10	9.32
Veal calves (hundredweight).....do.....	6.78	7.80	13.00	13.20	13.60	11.60
Lambs (hundredweight).....do.....	5.83	7.79	13.20	13.00	13.60	10.10
Butterfat (pound).....cents..	26.3	29.1	50.9	50.9	50.8	48.3
Milk, wholesale (100 pounds).....dollars..	1.60	1.51	3.31	3.35	3.31	2.82
Chickens (pound).....cents..	11.4	14.9	23.7	24.2	24.5	19.6
Eggs (dozen).....do.....	21.5	21.7	31.9	41.0	35.8	34.0
Wool (pound).....do.....	18.3	23.8	39.0	40.1	40.4	31.5

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments, made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonability.

<sup>7</sup> Preliminary.

turkey growers averaged 31.6 cents per pound in 1944, the highest on record.

Egg production during January was 346 million dozen, 8 percent below a year earlier. Because the 470 million hens and pullets on farms January 1, 1945 were 9 percent below a year earlier, a continuation of the declining rate of egg production is in prospect for this year, possibly averaging 8 to 10 percent below last year.

Prices for eggs received by farmers in mid-February averaged 35.8 cents per dozen, 105 percent of parity and 3.9 cents more than in February 1944. During the next few months egg prices will probably be higher than last year, largely because of heavy civilian demand and a military procurement at least as large as in 1944.

Along with very tight civilian supplies of red meats, poultry meat supplies are far below those of last year and have been declining seasonally in recent weeks. Yet the armed forces requirements for poultry meat are very large. To aid them in getting 70 million pounds of canned chicken and turkey, War Food Administration recently issued an order setting aside the sale of all canned poultry for Government purchase. In addition, the armed forces are buying about 4 million pounds of dressed chicken a month in areas covered under War Food Order 119 and an undetermined amount elsewhere.

## INCOME

**R**EVISED estimates of cash receipts from farm marketings of crops in 1944 are now placed at \$8,604 million dollars, 8 percent above the revised estimate of 7,980 million dollars for 1943. Important in bringing about this gain for 1944 were the relatively large acreages harvested, high yields, and slightly higher prices for most crops. High percentage gains were shown in wheat, cotton, tobacco, citrus fruit and apples.

Regionally the greatest increases

over 1943 were made in the South Atlantic and South Central States.

## Cash Receipts from Farm Marketings of Crops, 1943 and 1944

Crop group	1943	1944	1944 as percent of 1943
	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Per-cent</i>
Food grains	947	1,191	126
Feed grains and hay	1,126	1,116	99
Cotton and cottonseed	1,318	1,490	113
Oil-bearing crops	676	477	71
Tobacco crops	540	717	133
Fruit and nuts	1,203	1,476	123
Vegetables	1,592	1,489	94
Sugar crops	107	123	115
Forest products	101	110	109
Other crops	371	414	112
Total	7,980		108

NOTE.—Estimates of cash receipts from marketings of livestock are not yet available.

## COTTON

**S**EVERAL Government actions in late February are designed to relieve the critical civilian shortage of low and medium priced cotton clothing and household goods.

A War Production Board order requires certain percentages of particular kinds of cotton goods to be set aside exclusively for the manufacture of low and medium priced civilian products.

The Office of Price Administration supplemented the WPB order by additional control of manufacturers' prices. Each manufacturer must redistribute his sales—the average of his selling prices must not be higher than the corresponding quarter of the base period, July 1, 1942, to June 30, 1943.

These actions, it is hoped, will help make needed cotton goods more available to consumers by summer. In addition, the following two actions are designed to raise the general level of cotton textile production.

Half the spindles now producing spun rayon, according to another WPB order, must be converted to cotton so as to increase the manufacture of needed textiles.

In addition, the War Labor Board ordered an increase from 50 to 55 cents in the minimum hourly wage of employees in textile mills, and a blanket wage increase of 5 cents per hour in mills involved in a recent wage dispute. The order also allows vacations with pay, a premium of 5 cents an hour for third shift workers, and widens the spread by as high as 5 cents an hour in the wage rates of lower- and higher-skilled jobs.

## VEGETABLES

WITH few exceptions, prices for fresh market truck crops have been declining in recent weeks, both at shipping points and in terminal markets. This is usual for this time of year and reflects both a recession from the holiday level of demand and the arrival in the markets of somewhat more abundant truck crop supplies in general as winter and early spring production begins to appear in volume.

Weather so far this year has been mostly favorable for the planting, growth and harvesting of truck crops, though cold and dry weather have damaged and delayed development of the more susceptible crops in parts of California and Florida. Total production of the 18 winter season (January-March) truck crops this year is currently estimated to be 1,362,400 tons, 9 percent less than for the same period in 1944 but 44 percent greater than the 10-year (1934-43) average for the winter season. Total production of winter season crops in 1945, by individual crops, is indicated to be both above average and above last year for lima beans, carrots, cauliflower, celery, spinach, and tomatoes, but below both last year and average only for artichokes and green peas.

Indications are that production of winter season truck crops for fresh market shipment may exceed the quantities suggested in the goals by about one-third in the aggregate, and by varying amounts for all except kale, green peas, and shallots.

After making allowances for the quantities of truck crops that probably will be taken for noncivilian purposes, and including fall storage crops marketed after January 1, the total quantity of truck crops expected to be available to civilians on the fresh market during the first quarter of 1945 is 2,527 million pounds, 10 percent larger than that available to them in the corresponding quarter a year earlier. This comparison excludes potatoes and sweetpotatoes.

Throughout the first quarter of 1945, the high level of employment generally and large requirements are expected to support an active demand for fresh vegetables at prices as high and for quantities as large as last year during the corresponding period. Exceptions may include lima beans, carrots, and tomatoes.

The supplies of potatoes available to civilians since the first of the year, particularly in metropolitan markets, have been considerably smaller than normally might be expected at this season. This situation arose from the relatively rapid rate of movement of potatoes to market before January, from temporary embargoes imposed to relieve the overburdened transportation system, and from the shipping-permit restrictions put into effect in the principal late-potato producing areas in connection with the Government's procurement program. Market supplies of potatoes will not again be plentiful until the spring crop starts moving in considerable volume some time in May. In the meantime, supplies of the best grades and sizes will be insufficient to satisfy the demand at ceiling prices, and farmers will be able to market as table stock a greater-than-usual proportion of their smaller and lower quality potatoes.

The relative scarcity of late-crop white potatoes contributes in some degree to the demand for sweetpotatoes. Supplies of 1944-crop sweetpotatoes, likewise, have been dwindling at an unusually rapid rate. Farmers in general will be able to market a



larger-than-normal proportion of their total production, and at prices reflecting ceiling or near-ceiling levels.

## FRUIT

**C**IVILIAN supplies of fresh citrus fruits from this season's large crop are expected to continue plentiful for the next few months, but those of apples and pears, now taken from storage, will decline seasonally.

The 1944-45 crop of oranges is about as large as the record large crop last season. This season's crop of Valencia oranges in Florida and California, which will be marketed chiefly this spring and summer, is indicated to be about one-eighth larger than the previous crop and about two-thirds larger than the 10-year (1933-42) average.

Supplies of lemons and grapefruit continue plentiful, but supplies of the latter will decline seasonally this spring when they may become smaller than a year earlier, partly a reflection of hurricane damage to the Florida

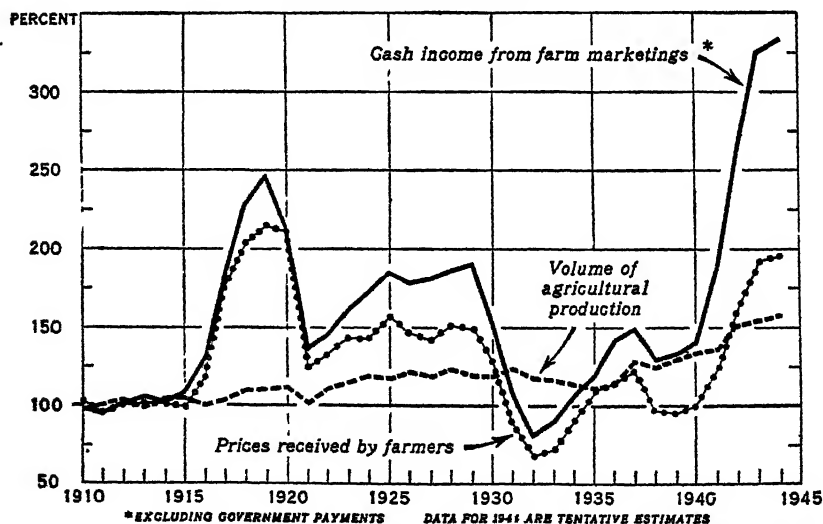
crop last fall. Recent prices for oranges and grapefruit have been near ceiling levels.

Because of heavy Government procurement of several leading varieties of apples in Washington and Oregon, through a set-aside order, civilian supplies of such apples will continue short for the remainder of this season. However, supplies of midwestern and eastern apples are larger than normal for this time of year. Recent prices for the better quality western apples have been near ceilings while those for midwestern and eastern apples, reflecting some deterioration in quality, have been somewhat below ceilings.

Civilian supplies of canned citrus fruit juices continue generally plentiful even though recent Government procurements have been heavy. Supplies of other canned fruits and fruit juices continue short. Prospective Government requirements from the 1945 pack of deciduous fruits are about as large as those from the 1944 pack. This points to short supplies for civilians again next season.

## AGRICULTURAL PRODUCTION, PRICES, AND INCOME, UNITED STATES, 1910-44

(INDEX NUMBERS (1910-14=100))



# The Statistical Laboratory at Ames

**W**HEN Uncle Sam does some fact gathering on agriculture he gets more for his money now than he did a decade or so ago. He gets more information, more accurately and more promptly for about the same time and effort expended.

The Department of Agriculture is now able to obtain national and regional estimates quickly and accurately of basic data dealing with many important farm problems. In contrast to the old standard methods of sampling that require many surveys before accurate estimates are possible, the Bureau of Agricultural Economics, through its Statistical Laboratory at Ames, Iowa, is now in a position to sample farms, by means of the interview method, in any county in the Nation in a relatively short time.

## Interview Method

The Bureau can do this because the Laboratory has developed the master sample technique which provides the necessary information and materials to carry out the interview type of sample quickly and efficiently. These developments in sampling are a product of the research in statistical methods carried out cooperatively by BAE and the Statistical Laboratory at Iowa State College in Ames.

Beginning about 8 years ago, the work of the Laboratory first dealt with improving crop and livestock estimates and now has become an integral part of the other statistical activities of the Bureau of Agricultural Economics as well as other Government agencies, notably the Census Bureau. Today a dozen or more persons, several connected with Iowa State College, are on the staff of the Laboratory at Ames. In a way, the Ames Laboratory serves agriculture in the field of

social sciences not unlike the Research Center at Beltsville does in the field of natural sciences. Both are continually developing new methods to do better jobs in their respective fields.

## Master Sample

The most ambitious project of the Laboratory and the main one for the past 2 years, almost to the exclusion of others, has been the initial development of the Master Sample of Agriculture. Consisting of approximately 300,000 farms scientifically drawn from the 6 million farms in the country, one or more from every county, the sample will become a useful tool in gathering facts on many important agricultural problems.

One of the first big uses is in the 1945 census of agriculture, and under way now is an extension of the sample to make it available for population estimates. It is now being used in a national farm wage rate survey which has just started.

The manifold problems of estimating and allocating food and fiber supplies during the war have accentuated the long-felt need for a means of getting reliable information quickly and directly from the producers of agricultural commodities. The Master Sample, a cooperative project of Iowa State College, Bureau of Agricultural Economics, and Census Bureau, is designed to do just this.

The technical difficulties of drawing an adequate sample for any one special purpose were numerous, but once the sample is drawn it is readily available for a wide variety of inquiries. In the designing of such samples, which have been studied in the Statistical Laboratory since 1938, the principle of many small units widely scattered being preferable to a few large ones has been followed from the start. But the most efficient size of unit had to be learned from experience.

NOTE.—A similar statistical laboratory has been in operation for some time in Raleigh through the cooperation of North Carolina State College and BAE.

A sample of 800 Iowa farms visited in December 1938 furnished the evidence needed. It was learned that, with a schedule calling for an hour's time and with enumerators traveling by automobile, the most information per dollar could be obtained from units consisting of one farm or two contiguous farms.

The random selection of the sample unit posed another problem. Under Middle-West conditions the section, or square mile, was thought of first. It lends itself readily to the scheme of random drawing, and is easily located by the enumerator. The final step was to identify a group of farms with each section. This areal sampling unit yields unbiased estimates of farm populations, acreages, production, soil condition, equipment needs, etc.

The next job was to adapt the areal unit to other regions of the country—to those in the West where roads do not follow the land survey and to others in the East and South where the land survey post-dated the establishment of property lines. After a considerable amount of experimental sampling the areal unit was successfully adapted to all localities.

Density of population, natural boundaries such as roads and streams, and availability of aerial photographs are some of the factors which determined the size and shape of each sampling unit. The average size of the final 1,200,000 sampling units, however, worked out to be about 2½ square miles containing 5 farmsteads. Thus, the Master Sample is really based upon units of farms rather than individual farms, a new approach in sampling technique applied in this manner.

### Comprehensive File

In the Master Sample file are found over 3,000 county highway maps, thousands of aerial photographs, hundreds of soil surveys and geological section maps, a great deal of census data, and much other related materials. And these materials are continually being kept current. The use

of photographs is of interest. Because most of the sampling units had to be outlined without benefit of natural boundaries and because farmsteads are not located too exactly on many maps, aerial photographs were obtained through the cooperation of AAA and inscribed with the sampling units. This enables the enumerators to locate sample farmsteads without ambiguity.

Under the supervision of a joint committee of the cooperating bureaus, the Master Sample may be used as a whole or in part by Federal and State agencies. One survey of 100 counties has already been made. Several visitation schedules have already been taken in Iowa because the available maps and materials are readily adapted to particular needs, even though the farms are not in the Master Sample.

### Other Projects

Because it is new and has attracted considerable interest, the Master Sample has been described in some detail. But the Statistical Laboratory has been engaged in other research projects. One is improving route samplings, an old and tested device of crop estimating. This method was adapted to forecasting the acreage, yield, and quality of the wheat crop in the Middle West. During 1940 the survey extended from Texas to Montana, preceding harvest by about 5 days. Through use of the crop meter, two small samples of wheat were taken from random points in the field that happened to fall at each 10th mile of wheat frontage. The wheat production in the Western Central States was determined within 2 percent of the final crop estimate, the sample consisting of only one six-millionth of the standing crop. Some avoidable biases were discovered, while others are suspected but not yet isolated. Owing to the success of this survey, Congress in 1941 appropriated funds to continue improving this sampling technique, but the war has interrupted the project.

Similar methods were devised for forecasting corn and soybean yields,

acreages, and quality. The cheapest way to estimate corn yield with a reasonable degree of accuracy was found to be a subsampling device whereby many ears in each random area were counted, an inexpensive process, while a few were measured for size and moisture content. Both of these projects have had to be suspended for the duration.

Experimental samplings are being studied for the purpose of forecasting marketings of livestock from given localities. Whether this can be developed to the point of general use before the war ends remains to be seen, but in a few instances it has proved useful in determining manpower and transportation needs.

These examples indicate the kind of research the Laboratory is doing but there will be much more when peace comes. Some of the staff members are now toying with the idea of using recent improvements in aerial color

photography to effect further improvements in crop estimating. There will probably be many post-war adjustment problems in agriculture in which the Laboratory can help supply new methods for obtaining necessary facts essential to the solution of the problems. The Master Sample can be used, other techniques now available can be employed, or new methods can be developed for particular needs.

In these days of rapid change, accurate and up-to-date information promptly supplied is essential to the intelligent solution of important farm problems. The research of the Ames Laboratory places BAE in a better position to more effectively serve farmers, as well as private and governmental agencies, in the collection and analysis of needed facts.

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## Short-Term Farm Debt Picture

MODERN agriculture could not function effectively without short-term credit. The seasonal variation in income and the heavy investment in equipment, livestock, and fertilizer account for the use of large amounts of operating credit for farm production. In addition, short-term credit is used widely for family living on farms. Ordinarily, this is the only type of credit used by tenants and often directly affects the progress they make in improving levels of living and in becoming farm owners.

Commercial banks and Government agencies are important sources of short-term credit. Also, a substantial amount of such credit is extended by merchants, implement dealers, fertilizer companies, finance companies, livestock firms, landlords, and private lenders. The total amount of short-term debt owed by farmers on January 1, 1944, is believed to have been about 3.5 billion dollars.

Short-term credit is the usual financial medium by which wartime expansion of agricultural production has been accomplished. Such credit use often affects the whole debt structure of agriculture for years. An examination of short-term credit expansion during World War I will reveal its connection with many of the financial difficulties of farmers and will be of use in an analysis of the current situation.

### World War I and After

Expanding agricultural activity and rising farm expenditures from 1914 to 1920 were accompanied on the whole by freely available short-term credit. Short-term loans extended by commercial banks alone rose from 1.6 billion dollars in the spring of 1914 to 3.9 billion dollars by the end of 1920. And the volume of credit extended by merchants, dealers, and miscellaneous lenders had a similar rapid rise.

The larger part of this credit was obtained on notes maturing in 6 months or less. Farmers customarily depended upon renewals to carry them until they were able to pay out of farm income. But the sharp drop in agricultural prices beginning in the middle of 1920 caused lenders in many instances to refuse renewals or to require additional security.

By 1921 the situation became critical. An increasing number of banks, dealers, and other creditors found themselves overextended on short-term farm paper. They curtailed new lending and began to insist upon more adequate security for their outstanding loans. Many lenders, fearful of the declining price level, liquidated the security of their borrowers, especially livestock, equipment, and other items of physical working capital. This forced out of farming many tenants and numerous owners who had little equity in their real estate.

A large number of farm owners could only repay their overdue short-term operating debts by getting mortgage loans on their farms. Well after the end of the active farm market in the middle of 1920, farm-mortgage debts continued to rise—increasing about 600 million dollars in 1921 and 1922. Much of this increase was for the refinancing or refunding of short-term debts. And further, the operating debt accumulated during the World War I inflationary period and then refunded into mortgage debt quite probably contributed greatly to the large number of farm foreclosures during the middle twenties and early thirties.

## World War II

The trend of farmers' short-term indebtedness in this war has in some respects been similar to the last war. The total outstanding short-term debt of farmers to commercial banks and Federal agencies (excluding nonrecourse Commodity Credit Corporation loans) increased from 1.5 billion dollars on July 1, 1939 to 1.8 billion dollars on July 1, 1944, an increase of 20 percent.

The volume of such credit has been influenced by two opposing forces. On one hand, greatly expanded farm production with higher unit costs has tended to increase the use of short-term credit. On the other, large farm incomes and shortages of goods have tended to decrease the need for this type of credit. So far, the net effect of these forces has been fewer borrowers, but larger loans.

Production credit association loans made in 1939 averaged \$1,365, and by 1944 they averaged \$2,231. Initial rural rehabilitation loans made by Farm Security Administration averaged \$560 in the fiscal year 1939 and \$1,105 in 1944. Supplemental loans made to existing FSA borrowers increased from \$213 to \$321 during the same period.

In general the short-term debt situation of farmers has improved. Delinquencies are much less frequent and there has been a shift from dealer and merchant credit to lower cost sources such as commercial banks and Federal agencies. Many of the larger institutional loans represent consolidation of scattered debts. However, a crop failure or a sudden drop in prices would leave some farmers with an excessive debt that might cause serious trouble.

## Differences during Both Wars

Despite the increase in operating credit now used by a large number of farmers the situation may not become so dangerous as that which evolved from World War I. The improvement in the farm-credit facilities serving farmers is of major importance. The commercial banking system has profited by its experience in the agricultural depressions of 1921 and early thirties. Caution in making loans, insurance of deposits, and a higher percentage of their investments in liquid Government bonds are factors of strength. The Production Credit System and the Farm Security Administration, which did not exist in the previous period, are means by which funds may be channeled to farmers in event of a credit emergency.

For many farmers the vivid memory of what happened after World War I has tended to keep debts from excessive levels. One other factor not present to the same extent in the last war is the drastic curb on expenditures. Automobiles, farm machinery, building materials, and household equipment have been relatively scarce. In addition to keeping non-real-estate debts at conservative levels, the inability to buy a large volume of goods has caused much of the high farm income to flow into liquid reserves of cash, bank deposits, and war bonds. Also mortgage debts on the whole have been reduced. As of the present time, many farmers are financially in a position to weather a period of adjustment without serious consequences.

### Post-War Outlook

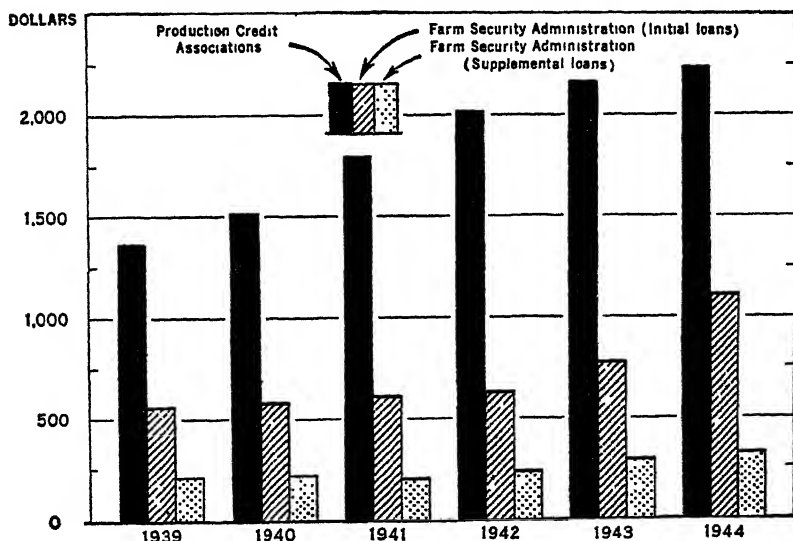
When the war ends many farmers will find themselves with a heavy debt incurred for farm production. As a whole, however, the short-term debt situation of agriculture may not then be serious. But the danger is not over. For a year or two immediately

after the end of the war it will probably be very easy to go into debt.

Prices of farm products may still be relatively high and the incentive to maintain maximum production will probably remain strong. It is expected that shortages of labor, feed, fertilizer, and machinery—the current curbs on expansion—will have been largely eliminated. Many farmers, especially returning veterans and war workers, may use credit to increase their operations. In addition to spending more for greater production, expenses will be heavy in replacing assets which have been wearing out. Farm buildings, fences, land, and machinery have been rapidly depreciating. The situation is similar with respect to consumer goods—automobiles, radios, washing machines, and refrigerators. The longer the war continues the greater may be the unfilled need for all kinds of goods.

It was estimated that on January 1, 1944, farmers had accumulated about 12 billion dollars in cash and other liquid assets. Much of this will be used in the immediate post-war

**AVERAGE SIZE OF PCA AND FSA SHORT-TERM LOANS MADE PER YEAR, 1939-44**



period for operating capital and for postponed purchases. It is quite probable, however, that many of those who need to make the heaviest expenditures do not have very large reserves of cash or war bonds. Farmers who previously suffered long periods of low income, tenants, and newly returned war workers and veterans may be especially in need of loans to make adjustments in their farming operations as well as to buy supplies and equipment for both farm and home.

As farmers increase their expenditures after the war the volume of short-term credit can be expected to expand greatly. Present indications point to plentiful credit from both public and private sources. Unwise use of credit may be encouraged by some lenders. It may well be that at the close of the war while the demand for farm products continues strong, a flurry of speculation will

occur in agriculture. During this period there is danger that short-term credit will be used in such ways as to involve many farmers in debts which will either embarrass them for many years or bankrupt them.

Sometime during the early post-war years agricultural prices may turn downward. As this turning point is approached the risks in assuming short-term credit become greater. The first impact of a price decline is on debts with near-term maturities, and a heavy debt incurred on the eve of a price decline could be disastrous. Credit obtained at one price level is difficult to repay at a lower one. These immediate post-war years should be an adjustment period in both debt structure and farm organization.

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## Surplus War Cargo Planes to Move Food

THE speed of the airplane in transporting perishable farm products to distant markets is agriculture's principal interest in air transportation. Development of air-freight transportation will permit shipment of fully matured and ripened products of excellent quality instead of products of various degrees of ripeness as now dictated by the length of time required for land transport. Air transportation will make possible the shipment of products to many markets not now accessible because of the limitations of existing transportation facilities. Perishables shipped by air-freight could be retailed in eastern markets 24 hours after harvest in California as contrasted with rail-freight movement which requires 10 days or more to reach the eastern seaboard.

### Potential Plane Capacity

The problem of the use of military transport planes should be examined in terms of potential carrying capacity

under modern methods of operation rather than as a specific number of planes.

The comparisons in the accompanying chart were made between the annual potential carrying capacity of 5,000, 10,000, and 15,000 assumed surplus war transport aircraft (20 percent four-engined and 80 percent two-engined) and the ton-miles produced by the various surface carriers in 1939. In presenting data on the carrying capacity of transport planes, it is realized that available cargo suitable for transport by aircraft in the United States is not likely to be adequate to fully utilize a large proportion of these surplus planes. Annual ton-miles per aircraft were calculated on the basis of data in two previously published reports on perishable truck crops issued last year by the Bureau of Agricultural Economics.

Reconversion costs for freight carrying would be relatively low. However, reconversion costs for passenger

carrying probably would be too high to allow the extensive use of surplus transport planes for this purpose. Availability to airlines of new and improved equipment would also be a limiting factor. A relatively small number of surplus planes may be used by the airlines until more modern equipment becomes available.

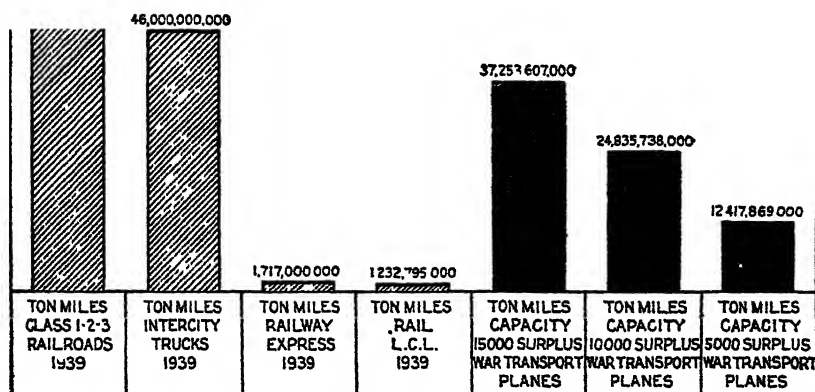
Two methods of disposal of these transport planes are: (1) Retention by

the armed forces, (2) absorption by domestic and foreign commercial aviation. According to a recent report prepared by Harvard University for the Senate Committee on Military Affairs,<sup>1</sup> not more than 300 planes could be fully utilized in domestic con-

<sup>1</sup> *Disposal of Surplus Aircraft and Major Components Thereof*, Report of the War Contracts Subcommittee to the Senate Committee on Military Affairs, June 26, 1944

# Ton Miles of Freight Handled by Railroads and Intercity Buses in 1939, and Ton-Mile Capacity of Surplus War Transport Planes

335,375,486,000



Edward S. Evans Transportation Research



tract cargo service. Part of the purpose of the present analysis is to show that probably there will be domestic contract air cargo for more than the 300 planes.

### Contract Carrier Method

The quantity of air-freight in the post-war era partly depends upon the absolute as well as the relative costs of air transportation. The cost of air transportation apparently is greatly influenced by the type of air carrier operation used. The contract-carrier type of air-transport operation makes possible certain economies in handling air-freight shipments which apparently result in lower costs of operation than for common carriers. The present airlines and railroads and some trucking firms operate as "common carriers." Usually the common carrier travels designated routes, makes scheduled stops, and accepts all freight offered by shippers, in conformity with its published tariffs and within its capacity to serve. For the most part, contract carriers are not regulated so strictly and serve specific shippers only under special and individual contracts.

Any freight airline beginning operations within the next few years might utilize surplus war transport ships of the type of the C-47 and the C-54A. A freight airline can readily use ships that have been in active military service 2 or 3 years. Ships so purchased probably could be operated over a period of 5 years or more at very low amortized capital cost. Quantities of surplus parts also may be available under certain conditions.

A large number of demobilized Army and Navy personnel probably will be available at wages commensurate with other occupations of similar skill and risk.

The 10-cent ton-mile cost of operating C-47 planes in hauling strawberries and tomatoes, and the 6.55 cents per ton-mile cost of operating C-54A planes in moving lettuce, as shown in two recent BAE studies, illustrate the economies which may be possible. The assumptions and the

basis for the assumptions made in these cost studies follows.

Available cost figures indicate, although not conclusively, that airlines of medium size have unit costs as low as or lower than much larger airlines. At the end of 1941 three medium-sized companies averaged 17.7 transport planes apiece. Converted into cargo-carrying capacity of C-54A's this would be equivalent to about an 8-plane fleet. This would provide a sufficient number of planes to have 6 in operation and 2 in reserve. On long hauls, 3 ships would be flying daily in one direction and 3 would be flying in the opposite direction. It is recognized that costs for an all-freight operation may differ from passenger operation, and also that the relation between total plane capacity and efficiency of operation may be different for C-54A's than for C-47's.

### Interchange of Products

The contract-carrier operation should be based on the interchange of agricultural products and manufactured products. An all-freight operation probably could only succeed with difficulty in moving either agricultural or manufactured products exclusively. The quantities interchanged must be fairly constant. The principal movement of commodities probably will be perishable agricultural products from west to east and south to north, and industrial products on the return haul. No doubt there would be some contrary minor movement of commodities.

It probably will be possible to provide full planeloads of agricultural perishables to move by air from extensive agricultural areas to metropolitan centers, but it probably will not be possible, at least in the beginning, to merchandise and ship by air a sufficient quantity of manufactured articles to provide full planeloads from a manufacturing center to an agricultural center. At present there are no data available which indicate how large the east-west or north-south load will be. The principle of the interchange of agricultural perish-

ables with manufactured products is illustrated in the accompanying map.

### Market Over 750 Miles Away

The route for a contract carrier operation between a manufacturing center and an agricultural center should be as direct as possible. It should be along an established airway equipped to permit night flying. In order to justify the cost of air transportation between these two centers they should be at least 750 miles apart. However, the longer the distance to be hauled the fewer the number of commodities which can stand any given level of rates. Preliminary research indicates that air-borne agricultural perishable products could compete most advantageously with surface-borne products when transported between 1,000 to 1,500 miles.

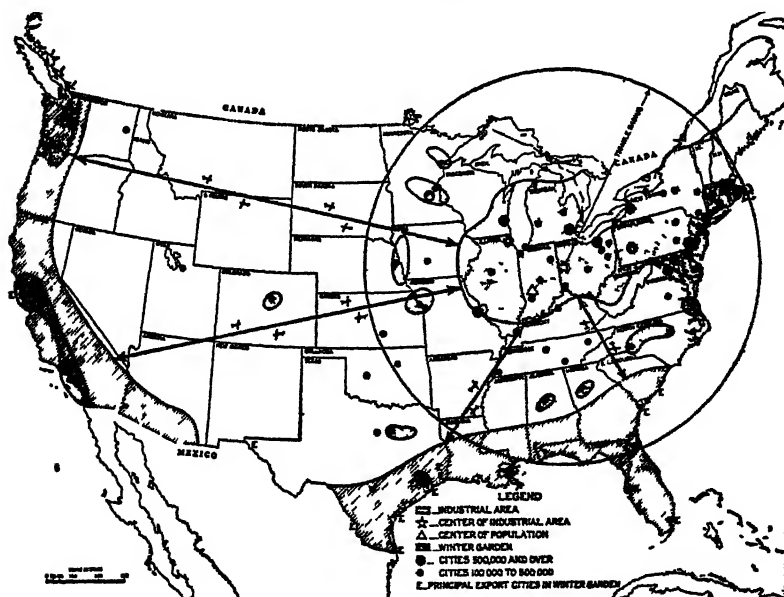
The metropolitan centers should be a combination of cities so that sufficient cargo may be collected for the west-bound or south-bound movement. For efficient operation of the 8-plane fleet, the centers should be within an

approximate radius of 300 miles. The metropolitan center should be a manufacturing city which produces a variety of relatively high-priced manufactured articles.

To insure a sufficient volume of manufactured products for the return load it would be desirable that the area originating the agricultural shipments be within 100 miles of an important city exporting manufactured products. The market for manufactured goods is thus materially extended by the inclusion of a foreign market in which the time factor is a most important consideration. Airplanes carrying industrial commodities from a manufacturing center would fly direct to the exporting city adjacent to an agricultural area, unload the commodities for local distribution and foreign markets, and then fly to the neighboring agricultural center to pick up its return load of perishables.

To maximize the development of the east-west or north-south load of industrial products, it probably will be necessary to fly to the same terminal

### Proposed Interchange of Products by Plane Between the Winter Garden and Industrial Area



Edward S. Evans Transportation Research

city during the entire year. If shipments of perishables are not available during the entire year, the pay load of the planes may be reduced to such an extent that the entire operation may not be feasible. The originating point for perishables could be shifted with relatively little difficulty to any point within 300 to 400 miles of the terminus of the east-west or north-south shipments, but greater shifting probably would cause difficulty.

### Potential Volume of Produce

Fruit and vegetable shipments from the "Winter Garden" area to the northeastern industrial area of the United States, potentials for air transportation, are estimated at 5 billion ton-miles. The 5 billion ton-miles are net after eliminating the shipments which originated within 750 miles of their point of consumption and after eliminating fruits and vegetables such as potatoes and carrots which probably would not be shipped by air, for various reasons, in appreciable quantity under expected post-war conditions. In addition to the regular shipments now being moved by surface transportation, new business may be originated in the form of semi-tropical fruits; concentrated, consumer-packaged foods, such as fresh orange juice or spinach; and additional tonnage of products resulting from an increase in the consumption of high-quality produce. Because of the difficulty in evaluating the po-

tential quantity of this tonnage, no separate estimate was made but the potential tonnage was weighted in the final estimate of the total ton-miles of fruit and vegetable shipments which may move by plane in the post-war era.

Research by various organizations indicates that if air-cargo rates of less than 10 cents per ton-mile should be offered fruit and vegetable shippers, about one-third of the 5 billion ton-miles of fruits and vegetables originating from the "Winter Garden" area possibly would move by air cargo. If it is assumed that one-third of the 5 billion ton-miles, or 1⅓ billion ton-miles, moves by air in the post-war era, a fleet of about 380 C-54A's would be required or a fleet of about 830 of the C-47's (a smaller plane) would be needed. The number of planes of each type used would depend upon their availability and their relative suitability to the work to be done. For example, the total ton-mileage could be produced by a combined fleet of 605 planes, of which 190 would be C-54A's and 415 would be C-47's. Here the 190 C-54A's would contribute one-half the ton-mileage, and the 415 C-47's the remainder. This number of usable planes is at least double the maximum number estimated in the Harvard report.

R. W. HOECKER, *Bureau of Agricultural Economics* and L. H. BRITTON, *Edward S. Evans Transportation Research.*

## Cotton Marketing Margins

ONE of the greatest needs of the American cotton industry is increased market outlets and hence more consumption of cotton products. Essential to the problem of expanding these outlets are methods to increase the efficiency and reduce the costs of marketing and manufacturing. Such reductions in costs would make possible increased returns to growers and at

the same time lower prices to consumers.

A wider understanding of this problem will aid in its solution. Wartime price-control and production programs, to say nothing of post-war readjustments to peacetime conditions, emphasize the long existing need for more information on marketing and manufacturing margins for cotton. The

following discussion, taken from a rather extensive study, briefly touches on the margins, or costs, of rendering the various services incident to taking cotton from the farm and delivering the finished product, in the form of clothing and household goods, to the ultimate consumer. This information suggests the extent to which it would be feasible to increase the efficiency and reduce the costs of rendering these marketing and manufacturing services in the years ahead.

In the post-war years of readjustment to peacetime conditions, American cotton will encounter severe competition from cotton grown elsewhere and from synthetic fibers produced in the United States and in other countries. Some indications of the severity of this competition in the post-war period is suggested by the following information on recent developments and trends.

Supplies of foreign-grown cotton have increased greatly during recent years. Total supplies of foreign-grown cottons increased from an average of 16.6 million bales during 1927-33, 43 percent of the world total for all growths, to 23.8 million bales, 52 percent of the world total, during 1934-38, and amounted to more than 27 million bales, about 55 percent of the world total in 1943. Stocks of foreign-grown cottons carried over on August 1 increased from an average of 5.4 million bales in 1927-33, less than 40 percent of the total for all growths, to more than 14 million bales or more than 55 percent of the total for all growths in 1944, and further increases in 1945 are anticipated.

### Competition of Other Fibers

The competition of synthetic fibers has increased greatly. World production of rayon expanded from about 457 million pounds in 1930, the equivalent of about 1.1 million bales of cotton, to about 3,473 million pounds in 1942, the equivalent of about 8.2 million bales of cotton. In the United States, the 1943 production of about

656 million pounds of rayon, the equivalent of about 1.5 million bales of cotton, was more than 5 times as great as that of 1930. Prices per pound of rayon staple fibers declined from about 7 times the price of Middling  $1\frac{1}{16}$ -inch cotton in the early 1930's to about the same as the price of this cotton in 1943. Technological developments and the resultant improvements of lightweight synthetic yarns during the post-war period favor further expansion in the production and consumption of rayon and the newer synthetics instead of cotton.

These developments and prospects emphasize the desirability of closely examining marketing costs and margins for American cotton with a view to achieving utmost economy in the processing and distributing functions as a means of strengthening its competitive position. Substantial reductions in these costs or margins would have important influences on returns to American cotton growers, on the one hand, and on market outlets and standards of living, on the other.

### Marketing Channels

Taking cotton from farms and delivering it in the form of finished articles to ultimate consumers requires the services of many different types of middlemen. These services begin when seed cotton is hauled from the farm to the gin where such services are rendered as conditioning and cleaning of seed cotton, separating the lint from the seed, and packing and wrapping the lint into bales of about 500 pounds. Cotton usually moves from gins to compresses, where it is compressed to higher density, and then to warehouses where it is assembled and stored. From warehouses and compresses it usually moves to mills by railroad, motortruck, or by a combination of motortruck, railroad, and water transport.

At mills, the bales are opened and the cotton is picked, carded, combed (for fine yarns), and spun into yarn. On the average about 4.4 percent of the gross weight of the bale usually is

discarded as tare, about 4.6 percent usually is lost as nonspinnable waste, and most of the remainder, amounting to about 91 percent, is made into yarn. According to Census reports for 1939, for example, about 82.6 percent of the yarn was woven into cloth, about 9.3 percent was used by the knit goods industry, and the remainder was used in making thread, cordage, twine, tire cord, and other products.

Census reports and other information indicate that in recent years about 30 percent of the woven cotton cloth was used in the gray unfinished form, about 11 percent was colored yarn fabrics styled and finished by mills, and about 59 percent was finished from the gray. A large proportion of the finished cloth usually goes to cutters where it is made into wearing apparel and household goods. Of the total output of cotton manufactures in the United States in 1939 about 37 percent went into industrial uses, 38 percent for the manufacture of clothing, and 25 percent for household goods. Clothing and household goods usually go directly or indirectly through wholesalers, jobbers, or other agencies, to retailers who distribute them to ultimate consumers.

#### Division of Consumer's Dollar

The value of the products are enhanced so greatly by the conversions and services rendered in assembling, processing, manufacturing, fabricating, wholesaling, and retailing that returns to growers for the raw cotton account in many instances for only a very small proportion of the consumer's dollar paid for the finished cotton goods. Data on retail values of a group of 42 cotton articles of clothing and household furnishings and on farm values of equivalent quantities of cotton indicate that during the 17 years 1927-43, returns to farmers for the cotton used amounted on the average to about 10 percent of the consumer's dollar paid for the finished products. The proportion of the consumer's dollar represented by the farm value of the

cotton varied directly with the prices of cotton from about 13 percent in 1928 to about 5 percent in 1932 and to almost 13 percent in 1943.

The fact that, on the average, about 90 percent of the consumer's dollar paid for finished cotton goods is accounted for by marketing and manufacturing margins emphasizes the importance of a break-down to show the items included in these margins. Estimates, based on official data and on other information, were made to show the average distribution of the consumer's dollar paid for apparel and household goods made of cotton in 1939, the last "normal" pre-war year. The data available for this purpose are not complete and in some instances they are not strictly comparable. Consequently, some liberties were taken in approximating margins on the basis of these data and other information. Furthermore, the estimated margins were adjusted to approximate the farm-to-retail price spreads for 42 items of cotton clothing, household textiles, and yard goods, as calculated by the Bureau of Agricultural Economics.

Approximations were made to show the average distribution of the consumer's dollar for apparel and household goods made of cotton on the basis of specific conversions made or services rendered. The results show that on the average in 1939, about 7.5 percent of the consumer's dollar went for farm production, 0.7 percent for ginning and baling, 2.1 percent for all the services rendered in taking cotton from gins and delivering it to mills, 10.5 percent for spinning yarn and weaving cloth, 8.5 percent for dyeing and finishing the cloth, 29.9 percent for manufacturing apparel and household goods, 8.2 percent for wholesaling, and 32.6 percent for retailing.

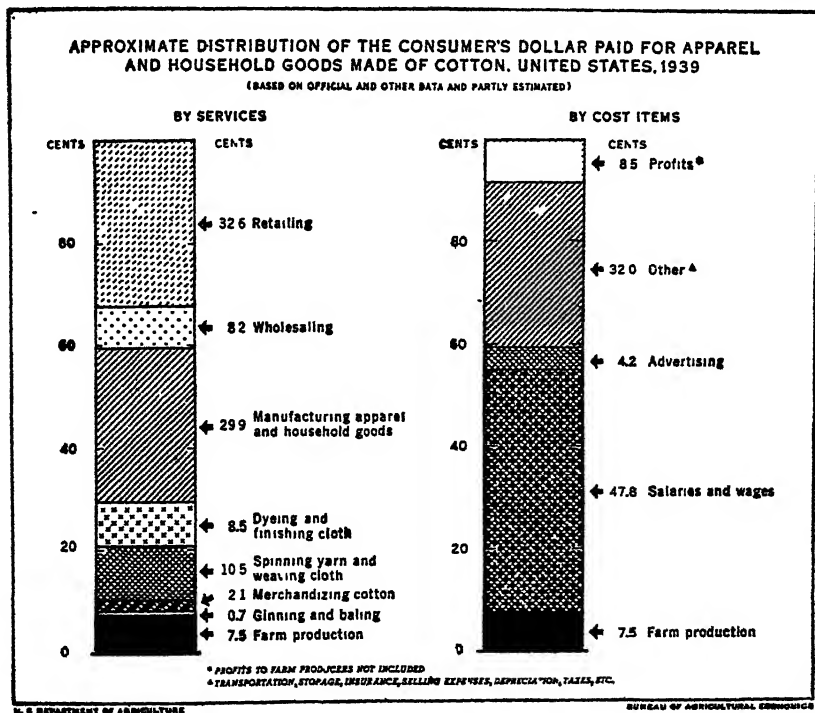
Information on specific items of cost indicate that salaries and wages accounted for more than half of the spread between retail prices of apparel and household goods made of cotton and returns to growers for the cotton

used. Costs of advertising amounted to about 4.2 percent and profits to all agencies except cotton growers amounted to about 8.5 percent of the retail prices of the finished products. It is interesting to note that salaries and wages for marketing and manufacturing cotton and cotton products amounted to more than 6 times the returns for farm production. Costs of advertising amounted to more than half and profits to all other agencies combined exceeded total returns to growers for the raw cotton.

Such data, by showing the approximate proportions of the marketing and manufacturing margins for cotton and cotton products, may serve as a basis for indicating the relative importance of bringing about increased efficiency and reductions in costs for the various agencies and functions involved. According to these data the margins for ginning and baling combined with those for rendering all the merchandising services involved in taking cotton

from gins and delivering it to mills amounted to only about 6 percent of the combined margins for manufacturing and finishing the cloth and fabricating it into wearing apparel and household goods, and to only about 7 percent of the combined margins for wholesaling and retailing. In other words, a reduction of 8 percent in the combined margins for wholesaling and retailing, or for manufacturing and finishing cloth and fabricating it into apparel and household goods, would have more influence in reducing the spread between retail prices to consumers for the finished products and prices to growers for the raw cotton than the complete elimination of all margins or costs for ginning and merchandising the raw cotton.

Although differences in the size of the margins are important considerations, such differences may not reflect very accurately the relative opportunities for making savings in marketing costs and charges that can be passed



back to cotton growers or on to consumers of the finished products. The means suggested for reducing margins or costs for specific items, functions, or agencies, indicated in many instances the possibilities for bringing about considerable reductions. It was pointed out, for example, that by increasing the volume of ginning per unit of equipment, by using the better equipment more efficiently, and by other econo-

mies, the net cost of ginning and baling cotton might be reduced in many instances by as much as 25 percent, and that margins for retailing textile goods might be reduced as much as 10 percent in many instances through the use of self-service or simplified-service arrangements operated under favorable conditions.

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## What Farms for Fighting Men?

FROM Australia, Alaska, Italy, England, Belgium, the Philippines, France, Greenland, South Pacific, and right here in America, literally from all over the world, come 2,300 letters a month to the Department of Agriculture in Washington. These letters are from servicemen and veterans—and from their wives, parents, and sweet-hearts. All ask about farming.

One soldier wants to know his chances for starting an orange grove. Another is interested in a cattle ranch out West. Another wants to specialize in sheep raising; another in apples; another in tobacco; another a dairy farm; another in wheat. One GI wants to grow coconuts in Hawaii. There is one who wants to raise frogs. A sailor wants to start a fur farm. And then there was the request from the wife of an overseas soldier who wanted help in locating a small island which could be acquired for a farm.

These are just a few examples, but the interests of soldiers, sailors, and veterans cover about every conceivable type of farming. Quite a number are weighing the prospects for dairy farming; and those considering poultry raising comprise one of the largest groups of all—including the few who are studying the prospects for poultry production on a large scale, and the many who are merely thinking of "a little place for chickens." Many ask for detailed information on markets, costs, profits, and farm management. Nearly all want to know about loans.

By and large, most servicemen

appear to have small places in mind—farms that can be worked with their own labor and that of their families. And a good many want to do part-time farming—to live in the country but get the bulk of their income from a job in a nearby town.

A good many of those who write—perhaps a third or more—indicate that they want to own a farm. Some want information to help them to be better farmers when they return to the farms they left on entering the service.

Of those wanting to own farms, a big proportion ask about free lands. They haven't yet learned how few are the tracts left, suitable for farming, that may be acquired under the homestead laws. An equally large group are interested in getting a place in Alaska. Some want to know about their chances of getting surplus military lands. Others want to know what is being done to open up new farm lands through irrigation and drainage.

"Will there be enough farms?" is a question often asked and not easily answered. It can't be answered with a plain "yes" or "no" because there are many elements connected with the supply and demand for farms which affect each other. If everyone wanting a farm—servicemen, war workers, and others—should try to get one tomorrow, regardless of whether the price justified a sound investment, there wouldn't be enough to go round. But many people will not buy if the demand is so strong that prices sky-

rocket beyond what they can reasonably afford to pay on the basis of the prospective income from the farms. Chances to get jobs in industry will also play a big part. Many farm-bred men will prefer to work in town if business is good, and many town boys with an eye on the country will hesitate to gamble on a farm if a good paying job awaits their return to civilian life. These and other factors are discussed in recent reports prepared by the Department of Agriculture.

The present turn-over, or sales of farm tracts, is something between 200,000 and 300,000 farm tracts a year. How many of these veterans will acquire no one knows, but a recent War Department survey of the number of Army men interested in farming furnishes a clue. If the other branches of the armed services are taken into account, there may be as many as 900,000 servicemen who have definite plans for full-time farming or farm jobs. But only about one-third will be looking for farms because the survey shows that two-thirds already have definite farms in mind. And so there may be only 250,000 to 300,000 servicemen actually searching for farms. There will, of course, also be some war-workers returning to farm jobs and farms when the war ends, but the number is unpredictable.

Granting that the Army survey is a good barometer and that 300,000 servicemen will be looking for farms, not all will want to buy tomorrow. Purchases will be spread over a period of months and years. Some will go to school first, and some will get farm jobs in order to get experience. Then, too, many prospective veteran-farmers will change their minds if the demand for farms boosts land prices too high.

Of course, there is sufficient evidence to indicate that it will not be easy for those wanting farms to find enough good ones—farms that will support a family and pay off the mortgage. And this is the real challenge to agricultural leaders and other friends of servicemen—to help them get started

on a sound basis and avoid the mistakes made by servicemen after the last war.

In answering the various questions from servicemen and veterans, the Department has followed the principle that the best practical advice can be given by someone close to the farm. County agents and State agricultural colleges are called upon for this close-to-the-farm advice, and their fine cooperation has been very helpful. Many letters are actually passed on to the field for direct reply to the servicemen. But most of the letters come from men, on the battlefronts or ships at sea, who give no indication of where they are from or where they want to do their farming. Even those who write from hospitals are just feeling the farm waters for the first time.

The Department is constantly preparing information sheets, circulars, and other publications designed to help these men and other prospective farmers.<sup>1</sup> In addition, the Department is working closely with the Armed Forces Institute, Veterans' Administration, and other agencies, in the preparation of study material as well as other information, all directed to help servicemen learn more about the ups and downs of farming.

Army demobilization centers, Army and Navy hospitals, the Veterans' Administration and other Government agencies have occupational consultants and counsellors who are arming themselves with these agricultural materials. And they—more and more in the future—will be directing servicemen to State and county sources, particularly county veterans advisory committees, for information applying to specific farming areas and specific farms.

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<sup>1</sup> Some of the titles are: *Shall I be a Farmer? Getting Started in Farming, Where are the Farms, If You're Thinking of a Little Place in the Country, (In preparation), About that Farm You're Going to Buy.*



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All live-stock
1935.....	87	98	117	125	139	103	114	116	116	115
1936.....	103	100	118	124	127	111	125	114	118	120
1937.....	113	117	126	131	133	126	130	110	132	127
1938.....	89	91	115	123	126	125	114	108	115	113
1939.....	109	105	113	121	124	123	110	95	112	108
1940.....	125	119	115	122	125	126	119	96	111	112
1941.....	182	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	259	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	198	174	200	194
1944-February.....	244	335	151	175	169	-----	201	168	199	194
March.....	241	332	152	175	169	-----	199	162	203	194
April.....	239	327	153	175	169	292	196	151	203	191
May.....	237	327	152	175	169	-----	194	153	201	190
June.....	235	327	152	176	170	-----	192	154	200	189
July.....	231	320	152	176	170	328	194	165	197	190
August.....	232	324	152	176	170	-----	196	171	201	194
September.....	231	320	152	176	170	-----	198	179	200	196
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	317	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	244	-----	153	179	172	324	202	199	203	202
February.....	-----	-----	-----	179	172	-----	200	183	209	201

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1935.....	97	107	174	94	120	82	119	102	109	84
1936.....	103	102	165	95	112	92	104	107	114	90
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	178	67	88	70	58	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	96	73	111	88	100	80
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	180	190	179	245	183	192	119
1944.....	165	166	354	184	209	215	212	194	195	115
1944-February.....	170	169	348	181	205	206	247	196	195	115
March.....	169	171	351	181	207	215	242	198	196	116
April.....	171	172	352	183	207	237	220	200	196	116
May.....	170	173	350	180	208	232	225	198	194	115
June.....	165	170	350	183	210	228	231	197	193	114
July.....	161	168	350	184	209	230	195	194	192	113
August.....	156	166	355	182	209	214	186	191	193	114
September.....	155	162	358	170	207	206	166	188	192	113
October.....	164	161	357	171	211	205	153	187	194	114
November.....	165	157	368	168	215	195	188	189	196	115
December.....	167	160	364	188	215	206	228	196	200	117
1945-January.....	169	163	365	183	214	205	262	200	201	117
February.....	169	164	360	161	215	211	223	197	199	116

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION

APRIL 1945

*A Brief Summary of Economic Conditions*

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FARMERS reported in March that this year they intend to grow about the same acreage of crops as in 1944. The projected total for the 52 principal crops would be 364 million acres, which is 2 to 3 percent below the 1945 goals. In early April, War Food Administrator Marvin Jones urged farmers to plant up to the goals, saying: "Nothing is more important in the entire war effort than for farmers to drive ahead with their production schedules, despite wartime handicaps. \* \* \* The production pattern established by the goals is still the most practical balance for 1945." The Administrator asked for bigger acreages of flaxseed, soybeans, peanuts, potatoes, sweet-potatoes, dry beans, sugar beets, feed grains, forage crops, hay and pasture. \* \* \* General economic conditions point to a continued strong demand for farm products. Nonagricultural income payments in 1944 totaled 141.1 billion dollars, 10 percent above 1943 and 130 percent above the 1935-39 pre-war average. In addition, net savings of individuals amount to nearly 40 billion dollars in 1944, compared with the 5.5 billion dollar pre-war average. \* \* \* Farm land values on March 1 were 52 percent higher than the 1935-39 average, with quick turnover in ownership continuing to increase, suggesting the need for measures to control excessive rises.

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# National Economic Conditions in 1944

**T**HE extremely high level of demand for farm products in 1944 was primarily because of the Nation's war production effort, resulting in the largest gross national product and national income ever achieved in the United States.

Gross national product—the total value of currently produced goods and services flowing to Government, to consumers, and for purposes of gross capital formation to business—amounted to 198.7 billion dollars in 1944. This is nearly 6 percent larger than 1943, and 143 percent above the prewar (1935-39) average. Total Government expenditures amounted to one-half of the gross product in 1944 as compared with only 17 percent in 1935-39. Nearly 87 percent of total Government expenditures in 1944 were for war purposes. Nonwar expenditures were slightly lower in 1944 than in 1935-39. Consumer expenditures for goods and services increased 66 percent from 1935-39 to 1944 but constituted only 49 percent

of the gross national product last year in contrast to 72 percent in 1935-39.

National income for the year 1944 totaled 160.7 billion dollars, 8 percent more than in 1943, and 146 percent above the 1935-39 average. Nonagricultural income payments received by individuals in 1944 amounted to 141.1 billion dollars. This is an increase of 10 percent over the previous year, nearly one-fifth greater than the increase in national income. Increased payments to military personnel accounted for a considerable part of the rise in nonagricultural income payments in 1944. The wage income of industrial workers was only 2 percent higher in 1944 than in 1943. However, the percentage increase from 1935-39 to 1944 in industrial workers' incomes was considerably greater than that for total nonagricultural income payments—226 percent as compared with 131 percent.

Part of the increase in national income during 1944 was due to price rises and to that extent does not rep-

## Economic Conditions in the United States—War and Prewar

	Unit	1935-39	1942	1943	1944
Gross national product <sup>1</sup> .....	Bil. dollars.....	81.9	151.5	187.8	198.7
Government expenditures: <sup>1</sup>					
Total.....	do.....	13.7	62.0	94.8	99.4
War.....	do.....		49.5	82.5	86.3
Consumer expenditures <sup>1</sup> .....	do.....	58.8	81.9	90.9	97.6
National income <sup>1</sup> .....	do.....	65.4	122.2	149.4	160.7
Nonagricultural income payments <sup>1</sup> .....	do.....	61.1	104.5	127.7	141.1
Income of industrial workers <sup>2</sup> .....	do.....	10.8	26.1	34.4	35.2
Cash farm receipts <sup>1</sup> .....	do.....	8.0	15.5	19.3	20.2
Net savings of individuals <sup>1</sup> .....	do.....	5.5	28.8	37.7	39.9
Industrial production: <sup>3</sup>					
Total.....	1935-39=100.....	100.0	199.0	239.0	235.0
Munitions.....	1943=100.....		56.0	100.0	112.0
Wholesale prices: <sup>4</sup>					
All commodities.....	1928=100.....	80.6	98.8	103.1	104.0
All commodities except farm and food.....	1928=100.....	81.2	95.5	96.9	98.4
Farm products.....	1928=100.....	76.0	105.9	122.6	123.5
Food.....	1928=100.....	79.1	99.6	106.8	105.0
Cost of living: <sup>4</sup>					
Total.....	1935-39=100.....	100.0	116.5	123.6	125.5
Food.....	1935-39=100.....	100.0	122.9	133.0	138.1
Nonfood.....	1935-39=100.....	100.0	112.6	116.7	120.0
Foreign trade: <sup>1</sup>					
Exports:					
Total.....	Bil. dollars.....	2.9	8.0	12.7	14.3
Lend-lease.....	do.....		4.9	10.1	11.3
General imports.....	do.....	2.4	2.7	3.4	3.9

<sup>1</sup> Department of Commerce.

<sup>2</sup> Bureau of Agricultural Economics.

<sup>3</sup> Federal Reserve Board.

<sup>4</sup> Bureau of Labor Statistics.

resent any increase in physical production. The 1 percent rise in the index of wholesale prices during 1944 is equivalent to about one-eighth of the increase in national income, while the 1½ percent rise in the cost-of-living index is equivalent to nearly one-fifth of the increase.

Cash farm receipts in 1944 were 5 percent above the previous year and 152 percent above the prewar average. These increases were the result of greatly expanded production and somewhat higher prices.

The net savings of individuals totaled 39.9 billion dollars in 1944, more than six times the prewar average and 18 percent above 1943. Individuals invested about one-third of their 1944 savings in war bonds. The remainder was used to increase bank deposits and currency holdings, to retire debts and for many other purposes.

Industrial production reached its wartime peak in 1943. It declined 2 percent in 1944, but the index was still 235 compared to 100 for 1935-39. The production of munitions continued to increase. The output in 1944 was 12 percent above 1943 and double 1942.

Employment in all nonagricultural establishments during January of this year totaled 37.9 million persons. This is 3 percent below the number employed in January 1944 and is the lowest since April 1942. Employment in manufacturing during January 1945 was 8 percent smaller than a year earlier, employment in mining dropped 7 percent and construction saw a 24 percent decline.

Wholesale prices have been largely stabilized throughout 1943 and 1944. The index for all commodities rose about 1 percent from 1943 to 1944. Food prices declined a little, while prices of farm products and all of commodities other than farm and food products increased slightly. Compared to prewar, the greatest increase has occurred in the prices of farm products—62 percent as compared

with 21 percent for all commodities except farm and food products.

The cost of living in large cities increased one-fourth from 1935-39 to 1944. Food costs rose about one-third and nonfood costs one-fifth during this period. However, from 1943 to 1944 food costs declined slightly while nonfood costs increased 4 percent, and as a result the total cost of living increased 1.5 percent.

The large volume of exports from the United States during the war has been an important factor in establishing and maintaining the present high level of demand for farm products. The total value of exports from the United States in 1944, not including shipments abroad to our own military forces, amounted to 14.3 billion dollars—nearly five times the average for 1935-39 and 12.5 percent above 1943. Exports under lend-lease in 1944 were valued at 11.3 billion dollars. This is nearly four-fifths of all exports and is equal to about 10 percent of last year's total production of movable goods in the United States.

Exports of agricultural products in 1944 constituted about 16 percent of the value of all lend-lease shipments and a somewhat smaller proportion of other exports. However, exports of foodstuffs, including lend-lease, amounted to about 8 percent of the total value of food produced in the United States in 1944, compared with 3 percent for prewar. Also food production in the United States in 1944 was over a third larger than in prewar years.

The value of imports in 1942, the first full year of war for the United States, was 12.5 percent above the 1935-39 average. In 1944 the increase above prewar amounted to 62 percent. About 40 percent of imports during 1943 and 1944 has consisted of military, strategic, and critical materials as compared with 27 percent of similar commodities in prewar years.

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# Commodity Reviews

## PLANTING INTENTIONS

THE Nation's farmers this year intend to plant some 364 million acres of the country's 52 principal crops, if plans indicated by the March 1 intentions of crop reporters fully materialize and the cotton acreage is about the same as last year. This acreage would be about 2 to 3 percent below the 1945 goals, but about the same as that actually planted in 1944, and 3 percent above 1934-43 average planted acreage. Changes in such conditions as weather, prospective labor and machinery supplies and prices may alter farmers' plans and thus change the 1945 acreage.

Prospective acreages of oats, flaxseed, rice, tobacco and sugar are larger than those actually planted in 1944, while somewhat smaller acreages are indicated for corn, spring wheat, potatoes, sweetpotatoes, soybeans, and peanuts. Larger declines are in prospect for barley, sorghums, dry beans and dry peas. The tame acreage is expected to be about the same.

Although the acreage reductions nearly offset the increases, this may not be true of production as the greatest acreage reductions appear to be in some of the least productive areas. Present indications point to a close utilization of the really productive land in all States, and production prospects appear better than usual for this time of year. Although fruits have started to bloom too early for safety and no acreage or production information is available about cotton, total output of other crops, if growing conditions are average, could equal the excellent showing made last year.

Substantial reductions in intended acreages are reported by farmers in a large southern area extended across half a dozen States from South Carolina to Louisiana and Arkansas, and nominal reductions in a dozen other States are indicated. But small

increases are planned in a number of States, mostly on the Pacific Coast and in the northern and central areas where acreages were reduced last year by wet weather and floods at planting time or by the dry summer which reduced the acreage of hay cut.

Total feed grain and hay acreage in prospect for 1945 is about 230 millions acres,  $1\frac{1}{2}$  percent below 1944 but  $2\frac{1}{2}$  percent above the 1934-43 average. Corn is 3 percent under 1944 plantings, with the largest percentage reductions in the Southern States. But, Iowa, Minnesota, Wisconsin, Michigan and South Dakota plan larger acreages.

The spring wheat acreage in prospect for 1945 is 2 percent below 1944, but the acreage of winter wheat planted last fall for 1945 harvest is 7 percent above the previous year. Consequently, the total acreage of all wheat indicated for 1945 is  $4\frac{1}{2}$  percent or nearly 3 million acres larger than the 1944 acreage.

The acreage intended for flax is 37 percent above that of the previous year but 34 percent below the record plantings of 1943. The acreage of both soybeans and peanuts intended for 1945 is about 2 percent below 1944, but much larger than the 1934-43 average acreages.

Prospective plantings of sugar beets in 1945 total 768 thousand acres—20 percent more than were planted in 1944, as suggested by the goals, but 13 percent under the 1934-43 average. The largest percentage increases in acreage in prospect are in Michigan, 45 percent; Wyoming, 29 percent; Ohio, 24 percent; Idaho, 20 percent; and California, 19 percent.

There does not appear to be any large area in the country where farmers are seriously handicapped by weather, finances, shortages of seed or shortages of feed. Tractors are being substituted for horses as fast as machines can be made available. Wartime difficulties,

including delays in transportation, and shortages of manpower, equipment, and some supplies, tend to limit expansion, but present conditions would permit another year of big crops if future weather permits.

### 1945 Planning Intentions, with Comparisons

Crop	Planted acreage		
	1944 actual	1945 goal	1945 prospective
		(Thousands)	(Thousands)
Corn, all.....	98,722	99,093	95,778
Wheat, all.....	65,684	67,731	63,597
Winter.....	46,349		49,589
Spring.....	19,335		19,008
Oats.....	42,933	44,259	40,555
Barley.....	14,300	13,911	12,235
Flaxseed.....	3,052	3,000	4,175
Rice.....	1,482	1,405	1,507
Sorghums, all <sup>1</sup> .....	18,212		16,285
Sorghums, all (excl. sirup).....	18,017	17,155	16,090
Potatoes.....	8,010	8,137	2,893
Sweetpotatoes.....	777	841	715
Tobacco.....	1,712	1,803	1,782
Dry beans.....	2,228	2,277	1,971
Dry peas.....	727	457	427
Soybeans, grown alone <sup>2</sup> .....	13,564		13,236
Soybeans for beans <sup>3</sup> .....	10,502	10,757	10,334
Peanuts, grown alone <sup>4</sup> .....	4,012	3,955	3,923
Peanuts, picked and threshed <sup>5</sup> .....	3,212	3,230	3,118
Tame hay, all.....	59,547	62,882	59,457
Sugar beets.....	639	951	768

<sup>1</sup> BAE Winter Wheat and Rye Report of December 20, 1944.

<sup>2</sup> For all purposes.

<sup>3</sup> All sorghum acreage less 1944 acreage harvested for sirup, by States.

<sup>4</sup> Harvested acreage.

<sup>5</sup> 1945 indicated solid equivalent acreage adjusted for the percentage harvested for beans.

<sup>6</sup> Assuming the usual relationship of acreages planted alone to acreages for picking and threshing, by States.

## LIVESTOCK

**L**ARGE purchases of meat for war uses, strong civilian demand, reduced output, and the current low level of meat stocks, will tend to maintain prices for meat animals, through the summer at least, near the maximum limits under price controls on meat and live animals. Prices received by farmers for most meat animals will average higher in 1945 than in 1944.

Hog slaughter throughout the remaining months of the hog marketing year (through September) probably

will be 25 to 30 percent below a year earlier. However, pork production will not be reduced in proportion to the reduction in slaughter.

Cattle and calf slaughter, now at record levels for this time of year, is likely to continue at a high level throughout the remainder of the year.

Slaughter of sheep and lambs in the remaining months of this year probably will be smaller than a year earlier, reflecting 6 percent smaller early spring lamb crop to be marketed largely before July 1 and a probable smaller late crop.

## DAIRY PRODUCTS

**M**ILK production during January and February was at a record rate and will probably continue for the next few months, reflecting the highest unit returns and ample feed supplies.

The higher payment rates for butterfat should tend to check further declines in creamery butter output. At present butter production is about 6 percent below 1944. Because of large non-civilian requirements, the set-aside for April and May is 40 and 55 percent, respectively. These percentages are substantially higher than those in effect last year for corresponding months.

## POULTRY AND EGGS

**P**RICES received by farmers for eggs for the next few months will probably average higher than in corresponding months of 1944. This will be primarily due to record per capita egg consumption and large military requirements. Although egg production will be 8 to 10 percent smaller than in the same months of 1944, declines in eggs used for dehydrating purposes will make more eggs available for civilians. Shortages of other foodstuffs, especially meat, have put pressure on the egg supplies largely as substitutes.

Poultry meat supplies will be in-

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
1935-39 average	107	128	84
1940	100	125	80
1941	124	132	94
1942	159	150	106
1943	192	182	119
1944	195	170	115
1944			
March	198	169	116
April	198	169	116
May	194	169	115
June	193	170	114
July	192	170	113
August	193	170	114
September	192	170	113
October	194	170	114
November	196	171	115
December	200	171	117
1945			
January	201	172	117
February	199	172	116
March	198	173	114

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

creasing seasonally but below last year. Armed forces' requirements have been announced at 670 million pounds, almost double those of last year. Accordingly, War Food Administration is urging poultry producers to raise more chicks for poultry meat purposes only. Furthermore, in order to bring about an increase in production of poultry meat, the Office of Economic Stabilization has authorized the Office of Price Administration to increase price ceilings on young chickens, averaging 1½ cent increase per pound. This should result in higher returns than last year to producers of poultry meat.

## FEED

**I**F FARMERS carry out their March intentions, the combined acreage of the four feed grains in 1945 will approximate 163 million acres. This would be a decrease of about 1.5 percent from the 1944 acreage, but 5 percent more than the 1939-43 average. If yields, by States, turn out

about as in recent years the production of the four feed grains on this indicated acreage would total about 119 million tons, or only 2 million tons less than the near-record production in 1944. However, weather and other factors affecting production could materially change this prospect.

In addition to a continued strong demand for livestock products, livestock-feed price ratios are likely to remain favorable for producers during most of 1945. Also, all kinds of hay, as well as alfalfa which has been under price ceilings, become subject to price control beginning May 1.

## TRUCK CROPS

**A**GGREGATE tonnage of winter-season commercial vegetable crops totaling 1.4 million tons this past winter was 7 percent below 1944 but 47 percent above the 1934-43 average. The bulk of these crops is harvested in January, February and March. Despite the lighter production this winter than last, prices received by growers for truck crops, as a group, have averaged somewhat lower than either last winter or the winter before, but have been maintained at a level considerably higher than for any other year since 1923.

Early indications on acreages of 13 spring truck crops, which usually comprise 55 to 60 percent of the spring total, point to an aggregate acreage of these crops 2 percent less than in 1944 but 11 percent above the 1934-43 average. These crops are harvested principally in April, May and June.

Considering estimates made to date covering all winter truck crops and portions of the spring and summer acreages, it appears now that acreage for the entire 1945 season may be moderately less than in 1944 but well above the 10-year (1934-43) average. Production on the acreage not yet harvested will, of course, be determined by growing conditions from now until the end of the season.

## TOBACCO

WITH practically all of the 1944 crop of tobacco in the hands of manufacturers and dealers, farmers are making plans for another large acreage this year. On March 1 farmers intended to plant 1,782 thousand acres, an increase of about 4.1 percent over 1944. Indications point to acreage increases for all classes of tobacco, the largest in burley, up 8 percent. If the expected acreage materializes and the 5-year (1939-43) average yields by types are obtained, total production in 1945 would be about 4 percent below 1944 and 7 percent below the record output of 1939.

The over-all production of tobacco products in this country is continuing at or near the highest level in the history of the industry. Government requirements for shipment to the armed forces overseas and for use in post exchanges in this country are being met, although supplies available

for distribution through regular retail channels continue to be inadequate to meet in full the wartime requirements. The industry is still facing difficulties in expanding production, a situation which may continue to prevail as long as the war lasts.

## WOOL

AS THE SHEARING of the 1945 wool clip gets under way, United States stocks appear less burdensome than a year ago. Stocks of apparel wool as of January 1, 1945, totaled about 750 million pounds (grease basis) compared with 810 million pounds a year earlier, with the carry-over on April 1 likely to be still smaller relative to 1944.

Because of current large requirements for domestic wool for Army orders, a considerable part of the 400 million pounds of domestic wool on hand as of January 1 will have moved

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		March 15, 1944	February 15, 1945	March 15, 1945	Parity price March 15, 1945
	August 1909- July 1914	January 1935-De- cember 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.46	1.47	1.48	1.53
Corn (bushel).....do.....	.642	.691	1.14	1.06	1.07	1.11
Oats (bushel).....do.....	.399	.340	.793	.733	.740	.741
Rice (bushel).....do.....	.813	.742	1.90	1.75	1.75	1.90
Cotton (pound).....cents..	12.4	10.34	19.97	19.99	20.24	21.45
Potatoes (bushel).....dollars..	.697	.717	1.37	1.65	1.71	1.25
Hay (ton).....do.....	11.87	8.87	16.00	17.70	18.10	20.50
Soybeans (bushel).....do.....	1.96	.954	1.89	2.10	2.13	2.16
Peanuts (pound).....cents..	4.8	3.55	7.52	8.14	8.20	8.30
Apples (bushel).....dollars..	.96	.90	3.07	2.58	2.54	1.66
Oranges, on tree, per box.....	1.81	1.11	1.95	2.25	2.36	2.03
Hogs (hundredweight).....do.....	7.27	8.38	12.90	14.00	14.00	12.60
Beef cattle (hundredweight).....do.....	5.42	6.56	12.00	12.10	12.30	9.33
Veal calves (hundredweight).....do.....	6.75	7.60	13.20	13.60	13.70	11.70
Lambs (hundredweight).....do.....	5.53	7.79	13.50	13.60	13.80	10.20
Butterfat (pound).....cents..	26.3	29.1	51.1	50.8	50.7	46.2
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.26	3.31	3.24	2.73
Chickens (pound).....cents..	11.4	14.9	23.8	24.5	25.0	19.7
Eggs (dozen).....do.....	21.5	21.7	30.1	35.8	33.1	31.2
Wool (pound).....do.....	18.3	23.8	40.4	40.4	39.9	31.7

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonability.

<sup>7</sup> Preliminary.



into consumption before the 1945 clip is available for mill use in the late spring. Mill use of domestic wool probably will decline, however, after current military requirements are filled. More than three-fourths of the stock pile of foreign wool owned by the Defense Supplies Corporation has been sold during the past year.

Total United States mill consumption of apparel wool in 1945 is likely to remain about at the 1944 level, an annual rate of 1 billion pounds (grease basis). Because of greatly increased Army requirements and the difficulty of increasing mill operations, the greater part of mill output for the first half of 1945 will be directed to military use. Hence a high rate of fabric production will be needed after military orders drop in order to replenish inventories of civilian goods.

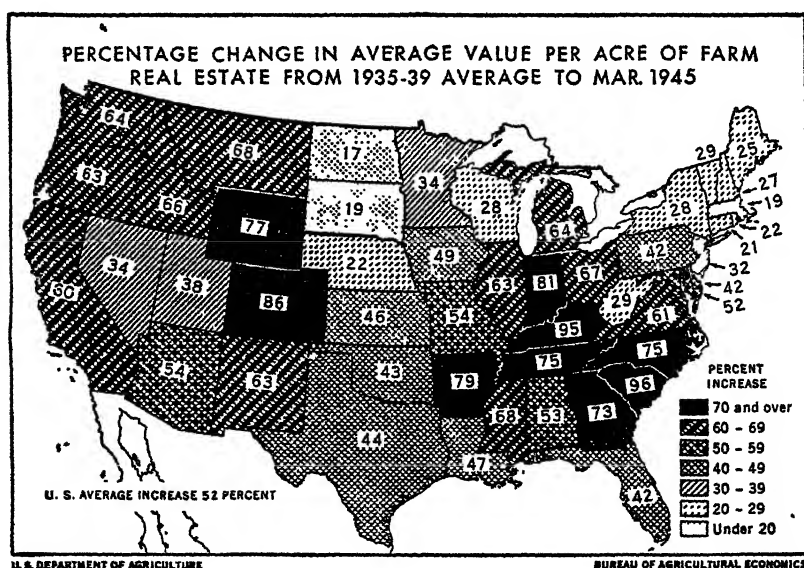
With sheep numbers on January 1, 1945, down 9 percent from a year earlier, a further decline in shorn wool production is in prospect for 1945. If production declines to the same extent as sheep numbers, the

1945 clip will be about 18 percent smaller than the 1942 record clip of 392 million pounds and the smallest since 1928.

## FARM LABOR

**F**AMILY workers this year will probably perform a much larger proportion of farm work than at any other time on record, according to March 1 reports. Although the number of family workers employed on farms as of March 1 (nearly 6,900,000) was 40,000 less than on March 1, 1944, the percentage decline was only about three-fourths of 1 percent, compared with a reduction of 6.5 percent in the number of hired workers.

Substantiating the reported scarcity of workers available for hire in rural areas, reports show only about 1,500,000 as of March 1, a decrease of over 100,000 from March 1, 1944. Increases over a year ago were recorded only in the Mountain and West South Central regions.



# Farm Land-Value Rise Continues

**D**URING the year just past farm land values advanced at about the average rate of the last four years. Although down somewhat from 1943, the volume of sales was at a high level. Resales after a limited period of ownership continued to increase. And despite the predominance of cash sales, a significant number of farms had heavy debts as the result of sale.

Land values rose 11 percent during the 12 months ended March 1, 1945, marking the fourth consecutive year in which values have advanced at an average rate of 1 percent a month. This increase brought values for the country as a whole to a level 52 percent above the 1935-39 average. The most substantial increases during the year occurred in a number of Southern States, where the advances approximated or exceeded those of the preceding year. On the other hand, in most Midwest States rates of increases in recent months were considerably under the 1943 rates.

## Sales Volume Down, Resales Up

For the country as a whole, the volume of sales for the last three quarters of 1944 was about 15 percent under the record volume of the corresponding quarters the previous year. Although the demand for farms slackened in some local areas, it remained strong in most sections of the country and the land market continued to be essentially a sellers market. The supply of farms available for sale was more restricted because of fewer offerings reflecting the depletion of "unwilling" owner holdings and the desire of more owners to retain their properties unless unusually attractive offers are made. This reduced supply condition appears to be the principal explanation for the decline in the volume of sales.

Marked increases in the volume of reselling after a limited period after purchase are reported in a number of

regions. In selected counties in the Far West, about one-fourth of all farms sold in the fourth quarter of 1944 had been held less than 2 years. For selected counties throughout the United States resales accounted for 13 percent of all sales during the last half of 1944, compared with 11 percent during the first half. About two-thirds of such resales were held less than one year and average gross profits in most regions ranged from 20 to 40 percent of the initial purchase price.

## To Curb Inflationary Advances

Current and potential developments in the land market appear to justify the serious attention being given by farm organizations, agricultural college groups, Government officials and others to the problem of inflation in real estate and other capital assets. In its report of October 1944, the Land Grant College Committee on Postwar Agricultural Policy recommended a number of steps to curb excessive increases in farm land prices. The North Central Regional Committee on Land Tenure Research issued a report in March 1945, dealing exclusively with the various phases of the problem of preventing land price inflation.

Possible lines of action that have been considered as means of avoiding excessive land-value increases are: (1) various educational and voluntary measures, (2) indirect control measures, such as revisions in the treatment accorded capital gains in the present revenue code, and (3) the more direct types of Government regulation involving curbs on land speculation mortgage credit controls, price ceilings and purchase permits.

Of the direct Government controls, those designed to strike principally at short-term speculation have received the most attention. The various antispeculation measures all attempt to discourage speculation by drasti-

cally limiting the net profit incentive from resale of properties after short periods of ownership. Transactions considered most likely to be speculative are segregated by limiting the application of proposals to resale, within a given period, of property acquired after a specified date; and the profit incentive is removed either by taxing away most of any gain that may arise or by preventing the accrual of gain through price ceilings on resales.

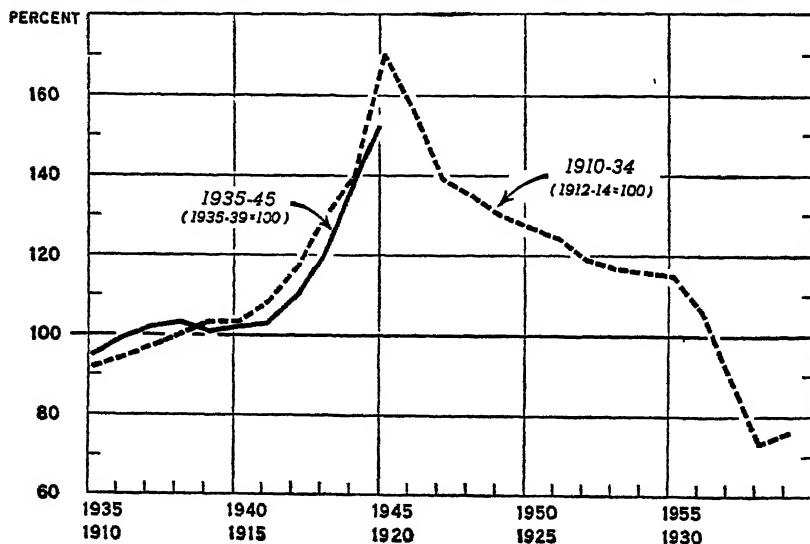
### Controlling Speculative Profits

Measures of this type would be expected to virtually eliminate the speculative profit motive as a factor in the demand for land. Not only would buyers interested primarily in resale profit possibilities withdraw from the market, but the prices offered by investors and farm operators would also be lowered somewhat because of the limited value that would be attached to possibilities for realizing capital gains. As a result, the bids for land would be more nearly dependent upon expected earning capacity

and other considerations such as security of principal.

Because such measures would not apply to first transfers, their initial effect upon the supply of land offered for sale would be quite limited in comparison with the expected reduction in demand. To the extent that present holders awaiting peak price levels considered such measures as effective means of curbing further price advances, the supply of farms offered from this source might actually increase. However, the longer a measure of this type were in effect, the larger would be the number of farms covered by restrictions. Such farms probably would not be offered for sale readily. In case income from alternative investments were lower, most owners of property subject to regulation would be unwilling to accept tax-reduced or ceiling-limited net proceeds. However, the cumulative supply restricting-influence of such measures would be materially reduced by provisions for the release of properties from coverage after they had been

**FARM REAL ESTATE: COMPARISON OF INDICES OF AVERAGE VALUE PER ACRE, 1910-34 (1912-14=100) AND 1935-45 (1935-39=100)**



held a sufficient period to qualify as "nonspeculative." In a tax approach this could be accomplished by a tax rate that would decline the longer the property was held. In a resale price ceiling measure, either a limitation of the time-period during which the ceiling would operate, or annual percentage increases in ceiling prices, would accomplish a similar purpose.

Even if no release provisions of the type indicated were in effect, several years would probably be required before the supply of farms would be materially restricted. Because such control proposals are considered as war-period emergency measures, the chances are the emergency would be over long before the supply-restricting influence even began to approach the demand-restricting effect.

#### Benefits of Control Measures

Control measures aimed primarily at speculative motives have appeal for a number of reasons. From the viewpoint of general welfare, activities of a speculative nature are usually considered to have negative social value. Such activities aggravate the problems of bona fide farmers, investors, and lenders—groups whose activities would not be adversely affected by

measures of the type indicated. In addition, the problems of administering such measures would be considerably easier than most other types of reasonably effective controls. Although some loopholes and borderline cases would be inevitable, for the most part the properties subject to control and the bases for control would be rather clear cut.

Even if speculative elements in the land market were virtually eliminated, the question remains as to whether or not this alone would be sufficient to prevent further excessive increases in value. As long as farm incomes remain at high levels, the chances are that pressure of demand for operation and investment would still cause values to advance. Profit taxes or price ceilings on resales, however, would materially reduce the rate of advance and should definitely prevent purely speculative activity from becoming rampant in any area. If combined with an intensive educational program, and possibly some control over credit, measures for curbing resale profits should aid materially in obtaining greater land value stability.

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## More Protein Hays to Meet Feed Needs

**I**NCREASES in the protein content of the tame hay supply and in per acre yields since 1925 have contributed very directly to the Nation's wartime food output. Roughage-consuming livestock are eating more hay of better quality than ever before, yet the acreage devoted to tame hay production is nearly 18 million less than would have been necessary if

these improvements had not taken place. Technological advance has, in effect, released these acres for higher priority war crops.

The average annual quantity of hay available during 1940-44 contained about 1.6 million more tons of digestible protein than that of the 1925-29 period, and a ton of average hay contained about 142 pounds as contrasted with 124 pounds in the earlier period, an increase of 18 pounds per ton. Thus if we had not shifted to the production of more of the

NOTE.—This article is a summary of a more detailed report *Changes in Hay Production in War and Peace*, by the author, which was recently issued by B.A.E.—Editor.

improved legume hays since 1925-29, about 18 million additional acres would have been needed to provide the same quantity of digestible protein available in the 1940-44 hay supply. At the same time, the average yield of all hay—including wild hay—during 1925-29 was 1.22 tons contrasted with 1.32 tons per acre during the past five years. Considering productivity alone, 6 million additional acres of hay would have been required to obtain the 96 million ton production averaged in 1940-44 if the 1925-29 yield level had prevailed.

### Shift to Better Hays

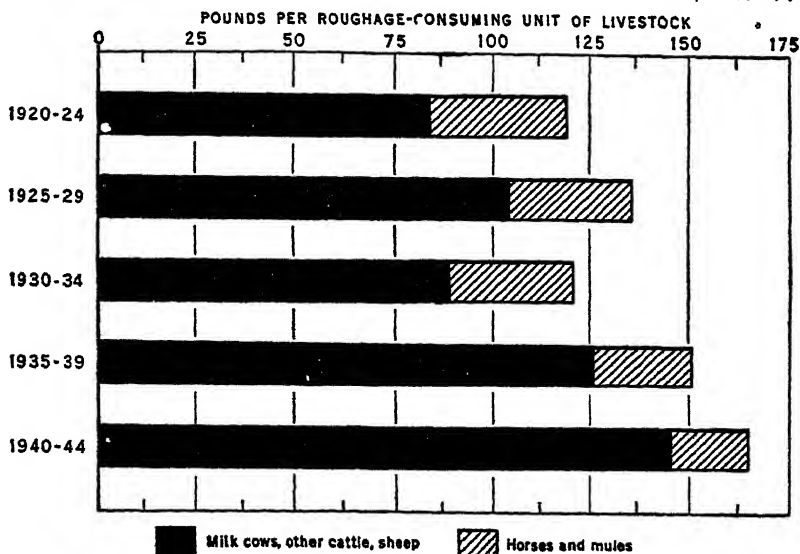
Of greatest significance in hay production trends is the pronounced tendency toward displacing lower-yielding, poorer-quality grass hays with more nutritious, higher-yielding legumes. This trend, already apparent in the thirties, has been accelerated during the war and may be expected to continue in future years. Wartime restrictions have slowed possible expansions in hay acreage which have stimulated more intensive production on the acreage available. Likewise,

the larger livestock numbers together with the difficulties of transporting feed grains to deficit feed areas have renewed emphasis on the need for as much local forage production as possible.

Twenty years ago nearly 60 percent of the country's tame hay acreage was reported as "clover and timothy" hay. This included timothy, or clovers, or mixtures of the two. But now these hays represent only a third of the tame-hay acreage. Displacement of timothy through the years by the higher yielding, more nutritious legume hays such as alfalfa, red clover and lespedeza has been of great influence in improving the Nation's supply of high quality forage.

The acreage devoted to the principal legume hays reported separately—alfalfa, lespedeza, sweetclover, soybean hay, peanut vine, and cowpea hay—has increased from about 30 percent of the total tame hay acreage in 1925-29 to nearly 50 percent in the 1940-44 period. In addition, many experts think that in recent years about a third of the acreage reported as "clover and timothy" probably consists of red

### DIGESTIBLE PROTEIN AVAILABLE IN ALL HAY, UNITED STATES, 1920-44



clover. Thus as much as 60 percent of the country's tame hay acreage may now be legume hays, contrasted with only 35 to 40 percent twenty years ago.

Comparisons on a production basis are even more significant when considering the national hay supply. The production of the principal legume hays reported separately has increased from about a third of the total tame hay produced in 1925-29 to well over half in the 1940-44 period. Making rough allowance for the red clover in "clover and timothy," it seems probable that two-thirds of all tame hay produced during the past 5 years is leguminous hay as contrasted with 40 to 45 percent twenty years earlier.

### **Importance of Shift to Legumes**

Part of the importance in this widespread shift to legume hays is, of course, the increased total production of tame hay made possible by the shift. Part of the importance of the shift is the dual use made of the legumes for livestock feed as well as for soil erosion control and building up the fertility of poorer soils. The shift is likewise of great importance in that it has kept pace with changes in the country's livestock pattern during the past 20 years.

Of the 85.8 million roughage-consuming livestock units during the 1920-24 period, 24.5 million were horses and mules, and 61.3 million were milk cows, other cattle and sheep. Of the 83.2 million roughage-consuming livestock units during the 1940-44 period, only 13.7 million were horses and mules, while 69.5 million were milk cows, other cattle and sheep. In other words, the percentage of horses and mules dropped from 29 percent in the first period to 16 percent in 1940-44, with a corresponding increase in the percentage of milk cows, other cattle and sheep.

The change in the pattern of livestock numbers plus the shift from timothy to the leguminous hays of superior protein content means that

roughage-consuming, livestock, after deducting the quantity fed horses and mules, now have available about 540 more pounds of hay per unit than 20 years ago. And more important, during the same period the pounds of protein available per unit of roughage-consuming livestock, exclusive of that fed horses and mules, have increased 74 percent, from 84 pounds in the 1920-24 period to 146 pounds during the past five years. The digestible protein content of the legume hays range from 8 to 12 percent, contrasted with 2 to 6 percent for hay made from the common grasses and grains.

The significance of this change becomes apparent when it is realized that milk cows, other cattle, and sheep require much more protein than do horses and mules whose energy is transformed into farm power rather than milk, meat and wool—products containing much protein. For example, the average protein requirement of a mature 1,000 pound horse at medium work is only about 70 percent of that of a mature dairy cow of the same weight and producing 20 pounds of milk per day. And a 1,000 pound fattening steer requires even more protein than the cow. Further, growing animals need much more protein than do mature livestock and currently, there are a great many more young cattle and sheep than young horses and mules.

### **A Look Ahead**

With the return of peace it is reasonable to expect larger quantities of fertilizers at prices that will permit their use to a greater extent on hay and pasture lands. Relaxing of war time pressures for production of crops for direct human consumption will turn the country's thinking to ways of increasing the consumption of mills, meat and other livestock products. This will be in line with good nutrition and the habits of American consumers. The return of large acreages of the present cropland to hay and pasture to meet this need will likewise be in

the interest of soil conservation and good land use—restoring depleted fertility reserves and maintaining and increasing soil resources for the use of future generations or for possible future emergencies.

Efforts should be focused on a better balanced forage supply adequate for every season of the year in each local area. This means not only giving attention to the improvement of hay—even at a faster rate than during the past 20 years—but also exploring the

possibilities to obtain more feed from permanent, rotation, and temporary pastures; from grass and legume silage; and from crop aftermath. Vigorous attention to all these phases of the Nation's future forage supply should be reflected in more and cheaper livestock products, better nutrition, sustained crop production and soil fertility, and a more nearly balanced agriculture.

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## Concentrate Rations Fed Milk Cows

**D**URING the war marked changes in the make-up and cost of concentrate rations fed to milk cows have taken place as farmers stepped up rates of concentrate feeding to stimulate greater milk production. Beset by difficulties in obtaining high protein feeds and a limited supply of feed grains to support increased livestock numbers, dairymen have changed the composition of rations to include more commercial mixed dairy feeds and more wheat than in former years. Producers have been buying more of the concentrates fed and producing less on their home farms. Costs of rations have been forced upward by higher prices of grains, millfeeds, and concentrates, and incentive payment programs have been developed to encourage feeding for heavy milk production.

Over a period of 14 years the U. S. Crop Reporting Service has collected information from dairymen on the kinds of concentrated feeds supplied to milk cows and on the value per 100 pounds of the concentrate ration. Feeding practices in herds kept by these 6,000 special dairy reporters is believed to be reasonably representative of the 2 million farms from which milk or cream is sold. The records

provide a factual background for comparing the composition and cost of wartime rations with those of earlier periods. A study of the changes is not only helpful for appraising the wartime feeding problems of milk producers, but is also significant from the standpoint of Government policy during the remainder of the war, and readjustment problems that will be faced by dairymen in the postwar period.

Farmers normally draw from a wide variety of grains, seeds, oil-meals, millfeeds, and commercial mixes in obtaining the concentrate rations fed to milk cows. Feeds used differ markedly between regions according to the kind of concentrates produced or available and the type of roughage fed. Relative prices of similar feeds, importance of the dairy enterprise in relation to other farm operations, intensity of milk production practices, and other economic considerations, cause wide divergence in the kinds of feed used. Broken ear corn may be the only concentrate fed to milk cows on some Midwestern farms where dual-purpose type cows are milked, whereas producers in the highly specialized fluid milk areas of the East

may feed a commercially prepared mixture containing more than a dozen different ingredients.

In the 1938-40 period prior to the war, corn was the most used feed in concentrate rations fed by dairy reporters, making up 28.8 percent of the total. Oats followed with 24.1 percent, while other important farm-grown grains included barley with 8.2 percent and wheat with 1.7 percent. Purchased wheat millfeeds, mostly bran, were included to the extent of 6.2 percent. Among the group of high protein feeds used by farmers to balance home-mixed concentrate rations, cottonseed meal, with 3.2 percent of the total, was the most important. Soybeans or soybean meal made up 2.7 percent, gluten feed or meal 1.2 percent, unprocessed cottonseed fed mainly to small herds in the South 1.0 percent, and linseed meal 0.7 percent. Miscellaneous feeds not listed separately, including grain sorghum, beet pulp and distillers' or brewers' grains, accounted for 5.3 percent. Commercial mixtures, prepared by mills or feed dealers from much the same ingredients but bought and used by farmers as a single feed, made up 16.9 percent of the total.

#### More Wheat and Commercial Mixes

Changes in rations caused by war conditions did not develop immediately during the first year of hostilities, but became apparent by the fall of 1943 when larger numbers of livestock on farms resulted in reduced feed supplies per animal unit. Use of wheat, normally limited by its high cost relative to feed grains, increased greatly when the Feed Wheat Program made large quantities available for feeding purposes at a price below the market level. On November 1, 1943, wheat made up 6.2 percent of the total ration fed in dairy reporters' herds, some four times the prewar proportion and higher than in any fall since 1931. Compared with the 1938-40 period the percentage of commercial mixed dairy feeds in the ration in-

creased by half, and on November 1, 1943, represented more than one-fourth of all concentrates fed to milk cows. Much of this increase was the result of difficulties in obtaining proper supplements for balancing farm-mixed rations. Also, under higher levels of concentrate prices, the charges for transportation, mixing, and handling incidental to commercial dairy feeds represented a smaller proportion of the total cost, and thus did not discourage the use of commercial mixed feeds so much as during periods of low price.

Farmers used smaller proportions of high protein supplements, wheat millfeeds, oats, and barley in wartime rations fed to milk cows. On November 1, 1943, oil seeds, oilmeals, and gluten as a group represented only 5.7 percent of the total concentrates, the smallest percentage in 14 years of record and less than two-thirds the proportion used in the 1938-40 period. The percentage of cottonseed meal in the ration dropped more than two-fifths, soybeans and soybean meal by one-third, and gluten and unprocessed cottonseed by more than half. Linseed meal while representing a larger proportion of the ration than in the 1938-40 period was down considerably from the percentage used in fall months of 1941 and 1942. Importance of wheat millfeeds, mainly bran which is a medium protein feed prized especially by some feeders for increasing bulk and palatability of home-mixed concentrate rations, has been gradually decreasing for a number of years. In the fall of 1943, it amounted to only 4.4 percent of the total as compared with 6.2 percent in the pre-war period.

#### Changes Reflect Relative Prices

Reduced proportions of oats and barley in concentrate rations fed to milk cows in late 1943 appear to reflect the high cost of these grains in comparison with corn and wheat. Prices received by farmers for oats, unrestricted by ceilings, advanced from 84 cents per hundred pounds in mid-



October of the 1938-40 period to \$2.33 per hundred pounds in October 1943, a gain of 177 percent. Barley prices advanced 165 percent in the same period. Meanwhile, October prices of corn, under control of an OPA ceiling, increased only 115 percent between the 1938-40 period and 1943. During part of 1943, wheat, made available for feeding purposes at a substantially reduced price, was cheaper per pound than the major feed grains.

In 1944, some shifts back toward prewar composition of concentrate rations fed to milk cows took place. Desired concentrates were more easily obtained as the result of larger supplies available per animal unit and the feed allocation programs of the War Food Administration. On November 1, 1944, the use of wheat, at 3.3 percent of the total ration, was only half as great as a year earlier. Oil seeds, oilmeals, and gluten as a group regained almost their prewar importance, but marked changes were still apparent for some of the individual feeds included. On November 1, 1944, soybeans and soybean meal were by a considerable extent the most im-

portant protein supplement, replacing cottonseed products in that role. Farmers continued to use commercial mixed feed to a much greater extent than in the prewar period, with the percentage of total ration on November 1 about the same in 1944 as in 1943.

#### Less Home-Grown Feed Used

Home-grown feeds as percentage of the total November 1 concentrate ration dropped from 55.3 percent in the 1938-40 period to 48.7 percent in 1943. Greater dependence on commercial mixes was a factor, but the purchase of some kinds of farm-grown feeds also increased. On November 1, 1943, only 30 percent of the wheat used in concentrate rations was home-grown, a marked drop from the 80 percent in the 1938-40 period. The proportion of barley grown on the farm where fed declined from 75 to 70 percent, while corn and oats were unchanged at about 85 percent. In late 1944, dairymen increased the use of home-grown feeds to 50 percent of the concentrate rations fed their milk cows, moderately less than in the prewar period and midway between the 60 percent typical in the depression

Table 1.—Feeds Used in Concentrate Rations Fed to Milk Cows, in Herds Kept by Dairy Reporters, United States, 1938-40 Average and 1941 to 1944

* Feed group	1938-40 Nov. 1	1941 Nov. 1	1942 Nov. 1	1943 Nov. 1	1944	
					May 1	Nov. 1
	Percent	Percent	Percent	Percent	Percent	Percent
Corn.....	28.8	30.1	28.5	29.8	32.1	29.1
Oats.....	24.1	24.1	23.4	18.5	16.6	20.1
Barley.....	8.2	8.7	8.3	5.5	4.1	5.0
Wheat.....	1.7	1.6	3.1	6.2	3.3	3.3
Cottonseed meal.....	3.2	2.3	2.9	1.8	2.0	2.1
Cottonseed.....	1.0	.7	.5	.4	.6	.6
Linseed meal.....	.7	1.9	1.9	1.2	1.8	1.8
Soybeans or soybean meal.....	2.7	1.9	2.0	1.8	8.2	3.4
Gluten feed or meal.....	1.2	1.3	1.3	.5	.7	.7
Wheat bran, shorts.....	6.2	3.8	3.5	4.4	4.2	.44
Commercial mixed dairy feed <sup>1</sup> .....	18.9	19.7	19.2	25.7	28.0	25.8
Misc. Other.....	5.3	3.9	5.4	4.2	3.4	3.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Home-grown feeds as percentage of total..	55.3	55.5	54.7	48.7	46.1	50.0

<sup>1</sup> In 1940 commercial mixers prepared dairy feeds from the following ingredients: Corn, 7%; other grains, 8%; wheat millfeeds, 14%; corn millfeeds, 11%; other grain byproducts, 9%; oilseed meals, 28%; molasses products, 10%; distillers' and brewers' grains 6%; alfalfa meal, 7%; and miscellaneous, 5%. Data for other years are not available.

period of the early 1930's and the 40 percent characteristic of major drought years.

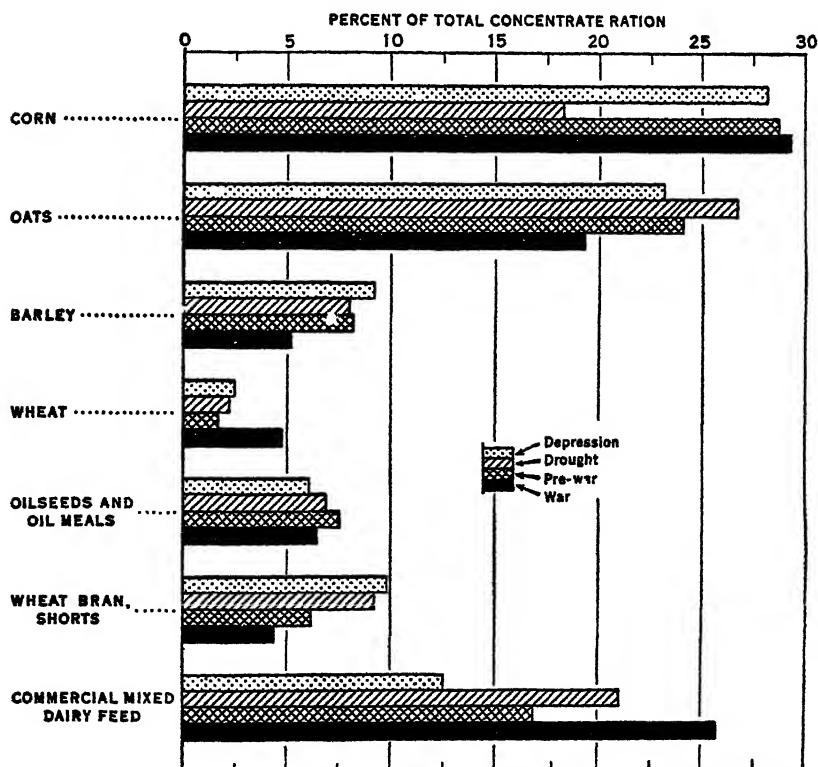
Determination of costs of concentrate rations is complicated by shifts in kinds of feeds used. In order to measure changes actually taking place, milk producers have been asked to report the value per 100 pounds of concentrate rations fed to their own milking herds periodically since 1931. These values represent the farmers' costs of such combination of purchased and home-grown feeds as was included in the concentrate ration actually fed. Purchased feeds were valued at prices paid, and home-grown feeds at prices they would bring on the local market. On the basis of the reported value

figures and prices of the important concentrates usually included in milk cow rations, a monthly series of concentrate values has been prepared by the Bureau of Agricultural Economics. This series provides a measure of the dollar value per hundred pounds of concentrate rations actually being fed by farmers, which, of course, is not a ration of constant composition nor necessarily of uniform or balanced nutrient content.

### Concentrate Costs Double

The value per one hundred pounds of the concentrate ration fed to milk cows has more than doubled during the war period. The upward trend was somewhat irregular and interrupted

### RELATIVE USE OF CERTAIN FEEDS IN FALL CONCENTRATE RATIOMS FED TO MILK COWS, UNITED STATES, SELECTED PERIODS\*



\*AS REPORTED BY DAIRY CORRESPONDENTS. SELECTED PERIODS ARE AS FOLLOWS. DEPRESSION, OCTOBER 1, 1922-32; DROUGHT, OCTOBER 1, 1933-37; PRE-WAR, NOVEMBER 1, 1938-40; AND WAR, NOVEMBER 1, 1943-44

occasionally by short periods of decline. In the 1938-40 period preceding the war, the United States average value was \$1.26 per hundred pounds, about one-sixth less than the 1922-41 long-time average, but almost one-half more than in 1932. During 1941 and the first quarter of 1942, the cost of concentrates advanced sharply. In the latter part of 1942, there was some decline under the influence of a large feed crop. Through 1943, the sharp uptrend in concentrate values was again in evidence, and continued at a somewhat moderated rate through the first half of 1944. In later months of that year concentrate cost dropped, with a decline of about 20 cents per one hundred pounds taking place between July and November. For the entire year of 1944, the value of concentrate rations fed to milk cows averaged \$2.61 per one hundred pounds, more than twice that in the 1938-40 period, but still 11 percent less than in the peak year 1920.

The value of grain and concentrates fed to milk cows in various parts of the country in 1944 ranged from less than \$2.00 per hundred pounds in a small section of the Western Corn Belt up to more than \$3.00 in extended coastal areas. In the Midwest, concentrates for milk cows are drawn mainly from large supplies of home-grown grain and are often fed with a minimum of grinding or other preparation. The high cost of rations in coastal areas reflects expenses of transporting grains and feedstuffs from surplus to deficit areas, handling charges incidental to purchased feeds, costs of commercial mixing, and the higher protein content of rations usually fed. The regional

variation in costs are important not only insofar as the region itself is concerned, but also because they are reflected in the national average costs for producers of different types of dairy products.

Between the 1938-40 period and 1944 the increase in value of concentrate rations in dollars per hundred pounds was greatest in the South. Both the South Atlantic and South Central Regions showed gains of more than \$1.50 per one hundred pounds as compared with less than \$1.20 in the West North Central Region where the smallest increase occurred. On a percentage basis greatest increases were evident in the central part of the country where all three major regions showed gains of 114 percent or more, compared with 84 percent in the North Atlantic Region and 99 percent in the South Atlantic Region. National average values of concentrate rations fed in milk-selling areas and in cream-selling areas are shown in table 2.

#### Prospects for Next Few Years

With prices for most major feeds now under price ceilings and feed supplies ample at least for the present, it appears unlikely that the value per hundred pounds of concentrate rations will continue the rapid advance of the past four years. In appraising the influence of present concentrate costs on the economic status of milk producers it is important to recognize that the percentage increase in feed prices has been greater than for milk and butterfat prices. It is only through the medium of dairy production payments direct to farmers that price relationships during the past

Table 2.—Value per 100 Pounds of Concentrate Rations Fed to Milk Cows, United States, 1938-40 Average and 1941 to 1944

	1938-40	1941	1942	1943	1944
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
In milk-selling areas.....	1.36	1.53	1.66	2.39	2.74
In cream-selling areas.....	1.11	1.30	1.66	2.09	2.39
Combined milk and cream.....	1.26	1.43	1.85	2.28	2.61

year have been such as to encourage a record rate of feeding. Thus price relationships between dairy products and concentrate costs that influence feeding rates will center around future Government price control and subsidy programs.

The make-up of concentrate rations fed to milk cows during the remainder of the war and in the postwar period will depend largely upon the production of various feeds and upon levels of prices. The increased use of commercial mixed dairy feed appears likely to persist as long as war needs place a premium upon intensive production practices. Further shifts in this direction do not seem likely to be great, unless appreciable shortages of ingredients for the mixing of rations on farms again develop. Continued

good crops and a lower level of feed prices in the post-war period would probably result in greater dependence by farmers upon home-prepared rations. The use of some feeds such as soybean meal, appears certain to continue greater than in pre-war years. The degree of increase, however, will depend on the extent to which wartime gains in production are carried over and on supplies of such competing feeds as linseed meal and cottonseed meal. Wheat probably will be used to only a limited extent in milk cow rations unless excessively heavy supplies or special Government programs reduce its cost for feed purposes to a level comparable with major feed grains.

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## Fruit Production Prospects for 1945

**T**OTAL tonnage of all fruit production in 1945, with average weather, is now expected to be about a tenth less than in 1944—when citrus output was a record high and deciduous was the largest since 1937—but about a tenth more than in 1943. Citrus production this year is expected to be about a tenth less than in 1944 largely because of severe hurricane damage in Florida last October. Deciduous fruits, especially in the Eastern and Central States, have generally produced large and small crops in alternate years. Production was large in 1944 and so an aggregate tonnage about a tenth less than harvested last year may be expected this year, if growing conditions are about average.

These appraisals of probable fruit production in 1945 are more reliable for citrus than for deciduous crops. Citrus crops from the bloom of the spring of 1944 are marketed between

October 1944 and November 1945 and there is little likelihood of extensive enough frost, wind, or hurricane losses between now and the completion of harvest to materially reduce prospective tonnage.

Most deciduous fruits, on the other hand, have not yet bloomed and are still subject to many weather hazards such as spring freezes and summer

This appraisal of fruit prospects was written before the arrival of the unseasonably warm weather in March which brought on very early blooms in most of the fruit areas. The danger of frost was not past by the first of April so that freezing temperatures this month would reduce crop prospects considerably below this appraisal.—Editor.

drought, which may materially reduce production below early season prospects. Although 1944 production was reduced to some extent by spring freezes in the Southern States, hail in California, drought and severe insect damage in the mid-west and the Appalachian area, for the country as a whole the season was unusually favorable so that total output was greater than expected before maturity of the crops. These preliminary statements for 1945 assume conditions for fruit production will not be as favorable as in 1944 and that the usual pattern of alternate years of large and small production will prevail.

### Factors Affecting Yields

Even though weather is by far the most important and least predictable factor affecting fruit production, many other factors have an important influence on the size and quality of fruit crops every year. Good cultural practices, adequate supplies of labor, machinery, spray materials and other supplies, combined with competent management, are all essential to successful production of large, high-quality fruit crops. For the past several seasons growers have produced fruit under difficult conditions. War-time shortages have necessitated many make-shift operations and the use of much unskilled labor, especially at harvest time. Leading cost factors such as labor and packages have risen sharply the past few years, but prices received for most fruits have been relatively favorable. The price index of all fruits combined for the 6 months September 1944 to February 1945 averaged about  $2\frac{1}{2}$  times the average for the 5 years, 1935-39.

The price outlook for fruits in 1945 seems favorable. Many growers undoubtedly will have difficulty coping with one or more of the important factors of production. Difficulties in transporting production materials to the farm as well as fruit from the farm to market are expected to be greater than last year. Hence it seems advis-

able to obtain spray materials, packages, and needed new machinery as early in the season as possible. Labor supplies will probably not be any better than last year.

### Apples

The 1945 crop of apples—the most important deciduous crop, and of all fruits second only to oranges in total tonnage—is likely to be smaller than in 1944. If history repeats itself—areas having large crops last year would be followed by somewhat smaller crops this year—one might expect a 1945 output from 5 to 10 percent less than the 1944 harvest.

During the last 36 years small crops of apples have followed large crops 9 times and large crops have followed large crops 4 times. These alternate bearing characteristics are most pronounced in the North Atlantic, South Atlantic, and Central States apple areas, and occur less frequently in the Western States where the bulk of the crop is produced in irrigated sections. In 1944, between 3 and 4 million bushels were blown off trees along the Atlantic Seaboard by the mid-September hurricane, but the bulk of these apples were salvaged for fresh fruit and processing. Drought and insects reduced quality and sizes in the Shenandoah-Appalachian region. In spite of these hazards, relatively large crops were produced in 1944 and as large or larger crops might be raised in 1945 in the South and North Atlantic regions, but the most likely expectation for these regions is a smaller production than last year.

In the Central States, drought and an unusually severe infestation of codling moth cut sharply the size and quality of the 1944 apple crop. Conditions were least favorable for apple production in Missouri and Illinois. This Central States region had a medium-sized crop last year and under average conditions might be expected to produce as large or a larger production in 1945. In the Western region conditions were unusually favorable

last year and the crop was the largest since 1938. A smaller production than in 1944 seems a reasonable expectation for this season.

### Grapes

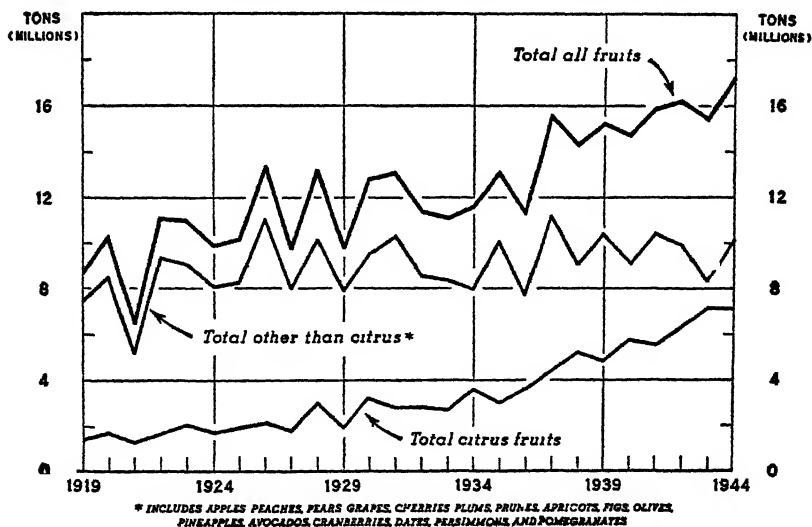
Second to apples in total tonnage of deciduous fruit, the 1945 grape crop is likely to be about the same size as in 1944, assuming average growing conditions. Approximately 90 percent of the country's grape crop is produced in California. In 1943, the California crop was a record high followed by a 15 percent smaller crop in 1944. Although the bearing acreage has stayed about constant during the past 10 years, per acre yields and total California production have increased and are now about a third above the levels of the midthirties. Better care and increased applications of fertilizer have stimulated production in recent years. Prices received by California farmers for the 4 most recent crops averaged about 3 times the average prices received for the 6 crops from 1930 to 1935. Low prices in the late twenties and early thirties resulted in many growers reducing acreage and others abandoning grape growing.

In Washington, large plantings in the late thirties accompanied by good care resulted in a sharp upward trend in production. Bearing capacity is now about 3 times that of 10 years ago. Both American and European type grapes are grown in Washington. In the predominantly Concord type territory of the Eastern States the production trend has been downward, with bearing capacity of vineyards now about three-fourths that of 15 years ago.

### Peaches

Peach production varies widely from year to year—the change in size of the United States crop being largely dependent upon the incidence of winter damage and spring frosts in the Eastern and Southern States. In the spring of 1944, freezing temperatures materially reduced early bumper crop prospects in the Southern States. However, conditions the rest of the season were comparatively favorable and the southern area produced a better than average crop. Bearing capacity is increasing in this section, the result of large plantings in the late thirties. Above-average crops were

FRUIT PRODUCTION: UNITED STATES, 1919-44



produced in 1944 in the Northeastern and North Central regions. Production trends appear about stationary in the Northeast but bearing surface is increasing moderately in the Central States due largely to plantings in Michigan in the late thirties. In the Western States, excluding California, the trend of production has been upward for several years. Bearing capacity of orchards in this region is now about one-half to two-thirds greater than 15 years ago.

United States peach production, excluding California, in the last 5 years has varied from 52,000,000 bushels in 1941 and 42,000,000 in 1944 to 17,000,000 in 1943. While a production as large as the bumper crop in 1941 or even larger is entirely possible in 1945, especially considering the increased bearing surface, large crops are seldom followed by large crops. Judging by the past, the most reasonable expectation would be a 1945 crop no larger and probably not so large as the 1944 harvest in the area which furnishes the bulk of the summer and fall peaches for the Nation's fresh markets. However, the production trend is expected to be moderately upward for the next few years. A scarcity of nursery stock has prevented many from increasing their plantings the last few years.

California—the country's leading peach State—produced 40 percent of the United States total in the 10 years 1933-42. The bulk of the California crop—80 percent of the total in the 1933-42 period—is grown for processing. Clingstones are utilized mainly for canning and Freestones for drying, although important quantities of Freestones are marketed fresh and canned, and small quantities of Clingstones are dried and marketed fresh in most years. The 1944 California crop was the largest since 1930 and the second largest of record. The trend of bearing acreage has been moderately upward since 1941 and is expected to continue so for several years due to plantings in the late thirties and early forties.

Production levels and potential bearing surface are now about a fifth above those of the mid-thirties. Many trees were pulled and some orchards abandoned following the low prices of the early thirties. Favorable prices, improved varieties, better care, increased fertilizer applications, and a higher proportion of the trees on more favorable soils and better adapted locations, have all contributed to a large increase in the average production per bearing acre. California peach orchards have been well cared for and conditions are favorable for good sized crops in 1945, but production of both Freestone and Clingstone varieties are not expected to be as great as the very large 1944 crops.

### **Prunes and Plums**

Prunes—produced almost entirely on the Pacific Coast—have declined moderately in production and bearing surface since the late thirties. About three-fourths of the crop is utilized for drying most years, with about 90 percent of the dried prunes produced in California. Plantings have been small for several years, many trees are old, and production levels the next few years are expected to continue to decline moderately.

Plums—with nearly all of the crop marketed as fresh fruit—have increased in production steadily since the mid-thirties. The California acreage has declined during this period but per acre yields have increased due to the removal of trees in low yielding areas and the coming into bearing of new plantings in more favorable locations. Plum production may continue to increase moderately the next few years if prices continue favorable.

### **Pears**

The trend of pear production was upward until the middle thirties and since then has been about stationary, with level of production now about double that of the early twenties. The Pacific Coast States now produce about 70 percent of the country's production and about 75 percent of

the pears grown and sold fresh or processed. In 1944 the Northwest (Washington and Oregon) produced a record large crop and California had about an average production although about 20 percent below the record large 1943 crop. A 1945 production in the Pacific Coast States about as large as in 1944 seems likely under average growing conditions. In the Eastern and Central States above-average pear production in 1944 followed near-failure crops in 1943. For this area as a whole this year's production probably will not be quite as large as last year's.

#### **Apricots**

A record large crop of apricots was produced in 1944. Over 90 percent of the production was in California where the 1943 crop was about 40 percent of average and less than one-fourth of the 1944 production in that State. United States production in 1945 is likely to be about a third less than in 1944 if the usual tendency prevails for very large California crops to be followed by considerably smaller crops. The trend of production in Washington has been upward for several years but if growing conditions are about average the 1945 crop is not expected to be as large as the record high in 1944.

#### **Cherries**

A record large crop of cherries was produced in 1944 with production of the sour varieties in the Great Lakes region accounting for most of the above-average production. Such a combination of unusually favorable conditions—freedom from late spring frosts, good pollination weather, and a heavy set with good sizes—is less likely to be repeated in 1945. Average production or about three-fourths as large a crop of 'sours' this year as last is the best expectation.

Production of sweet varieties varies less than "sours" from year to year. About four-fifths of the United States sweet cherry crop is grown in the Pacific Coast States where production

hazards are not so great as in the Great Lakes region. Production of sweet cherries increased steadily until the late thirties and the trend appears to be about stabilized with the peak of production probably having been reached in California. Peak production probably will be reached in a few years in the Northwest. A production in 1945 about the same or slightly less than in 1944 seems most likely under average growing conditions.

#### **Prospects in Years Ahead**

Production of all fruits has increased sharply in the past 25 years and especially since the middle thirties. Total fruit supplies in the calendar year 1944 were about 80 percent greater than in 1919-23 and about 45 percent above the average production from 1933-37. Most of this increase has been in the citrus crops, production in 1944 of all citrus combined being over 4 times the 1919-23 average and more than twice the 1933-37 average. Deciduous fruit production in 1944 was about 14 percent greater than in 1933-37. The marked upward trend in citrus production is the result of large plantings in the twenties and thirties. During the past few years, improved cultural practices, more adequate fertilizer applications, and increased irrigation have also been important contributing factors to the higher production levels.

A continuation of the uptrend in citrus production seems likely for several years but probably at a considerably lower rate than the last 3 or 4 years. Although plantings of peaches have increased in many areas, total deciduous fruit production seems likely to remain at about the present levels the next few years. Of course, production of all fruits is partly dependent upon relative prices. Favorable price relationships will encourage improved cultural practices, large fertilizer applications, irrigation, new plantings, and care of marginal plantings, whereas unfavorable prices will tend to limit production.

CARY D. PALMER  
*Bureau of Agricultural Economics*



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1935.....	87	86	117	125	130	103	114	116	116	115
1936.....	103	100	118	124	127	111	125	114	118	118
1937.....	113	117	126	131	133	126	130	110	132	127
1938.....	89	91	115	123	126	125	114	108	115	113
1939.....	109	105	113	121	124	123	110	95	112	108
1940.....	125	119	115	122	125	126	119	96	111	112
1941.....	162	169	127	131	132	154	159	121	146	140
1942.....	199	241	144	162	150	201	162	151	188	173
1943.....	239	318	161	167	162	264	193	190	209	200
1944.....	235	325	162	176	170	315	198	174	200	194
1944-March.....	241	332	152	175	169	-----	199	162	203	194
April.....	239	327	152	175	169	292	196	151	203	191
May.....	237	327	152	175	169	-----	194	153	201	190
June.....	235	327	152	176	170	-----	192	154	200	189
July.....	231	320	152	176	170	328	194	165	197	190
August.....	232	324	152	176	170	-----	196	171	201	194
September.....	231	320	152	176	170	-----	198	179	200	196
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	317	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	234	-----	153	179	172	324	202	199	203	202
February.....	235	-----	154	179	172	-----	200	183	209	201
March.....	-----	-----	-----	180	173	-----	198	175	211	200

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio <sup>4</sup>
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934.....	97	107	174	94	120	82	119	102	100	84
1936.....	108	102	165	95	112	92	104	107	114	90
1937.....	120	125	204	90	120	104	110	115	122	92
1938.....	75	71	176	67	83	70	88	80	97	77
1939.....	72	69	155	70	90	68	91	80	95	77
1940.....	84	82	136	77	96	73	111	83	100	80
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	160	190	179	245	183	192	119
1944.....	165	166	354	164	209	215	212	194	195	118
1944-March.....	169	171	351	161	207	215	242	198	196	116
April.....	171	172	352	163	207	237	220	200	196	116
May.....	170	173	350	160	208	232	225	198	194	115
June.....	165	170	340	163	210	228	231	197	193	114
July.....	161	168	350	164	209	220	195	194	192	113
August.....	156	166	355	162	209	214	186	191	193	114
September.....	155	162	358	170	207	206	166	188	192	113
October.....	164	161	357	171	211	205	153	187	194	114
November.....	165	157	368	168	215	195	195	189	196	115
December.....	167	160	364	168	215	206	228	196	200	117
1945-January.....	169	163	365	163	214	205	262	200	201	117
February.....	169	165	360	161	215	211	223	197	199	116
March.....	171	166	359	163	215	211	208	196	198	116

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

MAY 1945

*A Brief Summary of Economic Conditions*

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WITH Germany's defeat and with greater intensity of the war in the Pacific, the need for top production by American farmers becomes even greater than before. Near starvation throughout large areas of Europe makes it imperative that at least the minimum amount of food to sustain life be provided promptly if disease, riots, and other havoc are to be avoided. \* \* \* Meat production for 1945 is now expected to be only 22½ billion pounds, down 9 percent from 1944 output. The economic Stabilization Director announced a comprehensive meat program in an attempt to effect better geographical distribution of current and future supplies, and to encourage increased production. Slaughter quotas are being set for nonfederally inspected packing plants and for farm meat sales, to channel more livestock into federally inspected plants—which can make interstate shipments—and more plants are being urged to take Federal inspection. The scheduled midyear reduction of 50 cents in live cattle ceilings has been canceled to encourage continued cattle feeding. \* \* \* In addition to this program, the WFA-announced 50-cent increase in support prices for hogs through August 1946—with heavier hogs, up to 300 pounds, included—is hoped to bring about an 18-percent increase over last year in this fall's pig crop.

## FAO TO BE ESTABLISHED

**T**HE House of Representatives on April 30 approved the joint resolution authorizing United States participation in the Food and Agriculture Organization of the United Nations and sent the resolution to the Senate for consideration. This action is significant because FAO is the first permanent peace organization to achieve United Nations approval during the war.

Growing out of the Hot Springs conference two years ago and of the work of an Interim Commission since then, the constitution and purposes of FAO have been worked out and accepted by the required number of nations necessary for its establishment. It is expected that FAO will be formally set up this fall.

What FAO is and what it proposes to do was well summarized by President Roosevelt, on March 26, 1945, in his last message to Congress when he urged United States participation. Here is the heart of that message:

"The United Nations have already made much progress in setting up an organization for international security. But our collaboration for peace must be on a broader basis than security alone. We must strive to correct the conditions that predispose people toward war or make them the ready tools and victims of aggressors. We shall need also to work together as nations toward achieving freedom from want. Our participation in the Food and Agriculture Organization will be an essential step in this collaboration.

"The organization will seek its ends through the provision of international services in agriculture and nutrition which have heretofore been either lacking or inadequate. Among other things, it will provide the means for bringing together from all parts of the world the results of research in all the fields of agriculture and nutrition and for disseminating ideas and advice on how the available information can be of greatest usefulness.

"Improved standards of nutrition, increased levels of farm in-

comes, avoidance of agricultural surpluses—these are among the important objectives that the Food and Agriculture Organization will assist the nations of the world in achieving. The Organization will seek to better conditions in food and agriculture by fostering international cooperation in developing the optimum use of the resources of land, labor, and science. One of its important jobs will be to help in improving the marketing of agricultural products throughout the world so that farmers can find good markets here and abroad and continue to produce as fully as is consistent with sound conservation practices.

"The constitution of the organization provides that it shall include fisheries and forests within the scope of its work, and that in agriculture it shall cover both food and nonfood products. The work of the Food and Agriculture Organization will be primarily technical and advisory. Its staff will be small; its budget will be small, \$2,500,000 for the first year—with \$625,000 as the share to be borne by the United States—and about twice that amount in succeeding years. It is in no sense a relief organization.

"In becoming a member of the Food and Agriculture Organization, we will retain complete freedom of action in determining our national agriculture policies. Under its constitution the Organization will have no powers of direction or control over any nation. It will recommend agricultural policies and advise nations on their food and agricultural problems, but it will have no power to coerce or command. The constitution provides that all member nations shall have equal representation in the conference of the Organization, each being entitled to one vote. Our responsibilities in joining the Organization are of the same nature as those Congress has heretofore authorized in approving our participation in the Pan American Union."

— Editor

# Commodity Reviews

## LIVESTOCK

**P**RIMARY features of an integrated meat program, recently announced by the Economic Stabilization Director in collaboration with War Food Administration, Office of Price Administration and the War Department, include:

(1) Cattle feeding will be encouraged by continuing the present over-all ceiling on live cattle and calves through the remainder of the year—a 50-cent reduction was to have taken place on July 1.

(2) OPA will set quotas on the output of non-federally inspected slaughterers, based on meat production in corresponding periods of 1944 and on the number of ration points surrendered to OPA. Meat sales by farmers will be controlled through the issuance of sales permits for farm butchered meat, based largely on the quantity of meat sold in 1944 and on the ration points collected. These actions are designed to channel more livestock into federally inspected plants and stimulate a more equitable geographical distribution of meat by increasing the quantity that can move in interstate shipment to deficit meat-producing areas. Non-federally inspected meat cannot legally be shipped across State lines.

(3) To relieve the squeeze on packer margins the prices on beef sold to Government agencies will be increased, payment rates to cattle slaughterers in connection with the price control program will be increased, and ceiling prices on pork products or slaughter payments to hog slaughterers or both will be adjusted. Under a special adjustment provision no slaughterer who operated profitably in 1938-41 will be compelled to discontinue operations because of wartime conditions.

(4) Non-federally inspected packing plants will be urged to apply for Federal inspection to make more meat available for interstate shipment to

increase the civilian supply in meat deficit areas, and for Government procurement agencies.

(5) A coordinated rigorous enforcement campaign will be waged against black market operations in meat.

A 50-cent per 100-pound increase in the support price for hogs was announced on April 11 to encourage hog production. Through August 1946 the new support price will be on the basis of a Chicago price of \$13 for good and choice butcher hogs of all weights up to 300 pounds. The Government has assured farmers that there will be no reduction in the present ceiling prices for hogs before November 1, 1946.

The national goal set for the fall pig crop of 37 million head is 18 percent larger than the 1944 fall crop. A large fall pig crop is desirable because a substantial increase in feed grain reserves is in prospect along with a continued strong demand for pork.

The number of cattle on feed April 1 in 11 Corn Belt States was estimated to be 8 percent greater than a year earlier, but was less than for that date in any other year since 1940.

Despite a record high slaughter of sheep and lambs in the first 4 months of this year, slaughter during the last 8 months probably will be less than a year earlier.

With a reduced over-all meat supply in 1945 and an exceedingly strong demand for meat, prices for meat animals throughout the summer and early fall probably will continue at or near present high levels. Average prices received by farmers in 1945 will be higher than in 1944.

## WHEAT

**A** JULY 1, 1945, wheat carry-over of 350 to 375 million bushels appears probable, on the basis of current estimates of disappearance. This compares with 316 million bushels a year earlier and 235 million bushels for the 10-year (1932-41) prewar average.

# **Index Numbers of Prices Received and Paid by Farmers**

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
1935-39 average.....	107	123	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	180	106
1943.....	192	182	119
1944.....	195	170	115
1944			
April.....	196	169	116
May.....	184	169	115
June.....	183	170	114
July.....	182	170	113
August.....	183	170	114
September.....	182	170	113
October.....	184	170	111
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116
March.....	198	173	114
April.....	203	173	117

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

A carry-over of this size would be sharply below the 632 million bushels in 1942 and the 622 million in 1943.

Export demand which includes lend-lease, civilian relief feeding as well as commercial exports, is heavy. However, because of the difficulties involved in obtaining cars to move grain to ports, it is difficult to estimate the quantity which will actually be exported before July 1.

A winter wheat crop of 863 million bushels is indicated on the basis of April 1 condition. A crop of this size would be near 100 million bushels above that of last year and 37 million bushels above the largest previous winter wheat crop, produced in 1931. The reported condition of wheat is the highest since 1919, and the growth is 2 to 3 weeks ahead of normal.

There will be no official spring wheat crop indication until June 11. But moisture conditions are favorable for seeding spring wheat, and if spring yields should turn out about average, the total wheat crop would exceed last year's record 1,079 million bushels.

A crop in excess of a billion bushels would undoubtedly result in a larger carry-over on July 1, 1946, than on July 1, 1945, even with large-scale exports and continued relatively large domestic disappearance.

Current wheat prices are generally at ceiling levels and the highest in 20 years. Ordinarily, prices start downward in May, in an adjustment to the new crop basis. The adjustment this year may be less marked, however, as a result of large flour purchases by the Government, a good demand for wheat for industrial alcohol production, heavy exports, and the restricted movement caused by a shortage of cars. A very large 1945 crop probably would lower prices in 1945-46 compared with 1944-45, but with good demand in prospect, prices may be expected to continue at relatively high levels.

## **FEED**

**L**ARGE quantities of corn and oats were consumed by livestock and otherwise utilized during the January-March quarter of 1945. Domestic disappearance of corn during the 3-month period totaled about 800 million bushels, the largest January-March disappearance in at least 20 years, except for 1943 and 1944. Disappearance of 340 million bushels of oats during the same period also was the largest for the quarter in at least 20 years, except for 1943. Disappearance of 59 million bushels of barley during January-March, on the other hand, was 18 percent smaller than in the first quarter of 1944, and smaller than in other years for which data are available.

Stocks of 1,361 million bushels of corn, 439 million bushels of oats, and 109 million bushels of barley on farms, at terminal markets, and owned by the Government on April 1 totaled 47.7 million tons, about 19 percent more than on April 1, 1944, and about equal to the average for the 5 preceding years, when stocks were comparatively large. Stocks of corn were 23

percent larger than a year earlier, stocks of oats were 4 percent larger, and barley stocks were about 5 percent larger than a year earlier.

Carry-over stocks of oats and barley on July 1 probably will be somewhat larger than a year earlier. Carry-over of corn next October 1 may amount to about 450 to 500 million bushels, or more than double the carry-over of 215 million bushels on October 1, 1944.

## POULTRY AND EGGS

**W**HOLESALE and retail prices for poultry are expected to be at ceilings for the next few months. And prices received by farmers for chickens in 1945 are expected to be somewhat higher than in 1944 because of the 1½-cent increase in the ceilings for young chickens authorized by the Economic Stabilization Director, effective July 1.

Because of reduced supplies of red meat and large military requirements, the strong civilian demand will exceed

the supply of poultry meat by a wide margin. Poultry supplies for 1945 probably will be less than last year despite an expected increase in broiler production. Decreases in farm chickens sources will more than offset the broiler increase.

For 1944, total chicken meat supply (dressed weight) was 3,460 million pounds, 346 million pounds below the 1943 record but otherwise the highest ever reported.

Throughout most of 1945, prices received by farmers for eggs are expected to continue moderately above 1944. A strong civilian demand, primarily because of reduced supplies of other foods, will tend to keep wholesale and retail egg prices at ceiling levels. However, civilians are expected to receive more eggs in 1945 than in 1944, primarily because of the decline in procurement of new dried egg supplies for lend-lease purposes. For the first quarter of 1945 egg production was 7 percent below 1944.

The demand for baby chicks ex-

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		April 15, 1944	March 15, 1945	April 15, 1945	Parity price April 15, 1945
	August 1909- July 1914	January 1935-De- cember 1939				
Wheat (bushel).....dollars..	0.834	0.837	1.47	1.43	1.49	1.53
Corn (bushel).....do ..	.642	.691	1.15	1.07	1.07	1.11
Oats (bushel).....do ..	.399	.340	.794	.740	.710	.690
Rice (bushel).....do ..	.813	.742	1.87	1.78	1.77	1.41
Cotton (pound).....cents..	12.4	10.34	20.24	20.24	20.20	21.45
Potatoes (bushel).....dollars..	.697	.717	1.35	1.71	1.74	1.25
Hay (ton).....do ..	11.87	8.87	16.20	18.10	16.90	20.50
Soybeans (bushel).....do ..	.966	.954	1.91	2.13	2.13	1.66
Peanuts (pound).....cents..	4.8	3.55	7.63	8.20	8.24	8.30
Apples (bushel).....dollars..	.96	.90	3.17	2.54	2.53	1.66
Oranges, on tree, per box.....do ..	1.81	1.11	2.20	2.36	2.54	2.03
Hogs (hundredweight).....do ..	7.27	8.38	13.00	14.00	14.10	12.60
Beef cattle (hundredweight).....do ..	5.43	6.56	12.10	12.30	12.70	9.38
Veal calves (hundredweight).....do ..	6.75	7.80	13.10	13.70	14.00	11.70
Lambs (hundredweight).....do ..	5.58	7.79	13.60	13.80	13.90	10.20
Butterfat (pound).....cents..	26.3	29.1	50.9	50.7	50.5	45.0
Milk, wholesale (100 pounds).....dollars..	1.60	1.81	3.18	3.22	3.14	2.60
Chickens (pound).....cents..	11.4	14.9	23.7	25.0	25.7	19.7
Eggs (dozen).....do ..	21.5	21.7	27.1	33.1	33.0	31.22
Wool (pound).....do ..	18.3	23.8	41.6	39.9	40.4	31.7

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

ceeded supplies during March, reflecting the favorable egg price situation. Hatcheries were unable to fill all orders because of the shortages of suitable hatching eggs. During March the output of commercial hatcheries was 9 percent less than 1944. However, a late hatch is expected similar to that in 1943 when 17 percent of the total commercial hatch took place in June and July, compared with the 7 percent usual hatching during those two months.

## DAIRY PRODUCTS

**T**HE proposed dairy production payment rates for April 1945 through March 1946, recently announced by War Food Administration are designed to encourage the production of more butter than has been produced in recent years. These rates place farmers delivering cream in about as favorable position as those delivering whole milk. This should tend to increase milk production in butter-producing areas and probably check further diversion of cream to whole milk deliveries.

Rates of payment for whole milk will be a little above the previous 12-month period, but butterfat payments will be substantially higher. Butterfat rates in 1944 averaged about 8 cents per pound compared with the proposed rates averaging about 13 cents per pound.

This year cash receipts to farmers for dairy products are expected to be the same as in 1944, but because of larger production payments incomes may be substantially higher. Also, milk-feed and butterfat-feed price ratios will probably continue above 1944.

## FATS AND OILS

**P**RICES of most fats and oils will continue at ceiling levels through 1945 and into 1946, unless the war in the Far East ends in the next few months and the supply situation is not likely to be materially eased before mid-1946.

By that time lard and grease production (from 1945 fall pigs) is expected to be at a higher level than in 1945, and some copra may be forthcoming from the Far East.

Inventories of fats and oils are being materially reduced during the current crop year due to large war needs, and by October 1 may be the smallest on record in relation to needs.

The shortage of fats and oils necessitated recent orders reducing their use in the manufacture of shortening, soap, salad and cooking oils, paint, linoleum and oilcloth. Civilian supplies of food fats and oils for 1945 may be 10 to 15 percent less than the 45 pounds per capita consumed in 1944. Use of drying oils in civilian goods (such as paint and linoleum) may be 30 to 40 percent below last year, while fat supplies for civilian soap probably will be about 10 percent less.

Farmers' intentions on March 1 indicated slight decreases in 1945 in soybean and peanut acreage. On the basis of these indications and average growing conditions, no major change would be expected in output of soybean and peanut oils in the 1945-46 season.

Linseed oil production from domestic flaxseed would be only slightly larger in 1945-46 than a year earlier, despite the likelihood of a material increase in the 1945 flaxseed crop, because stocks of flaxseed on hand at the beginning of the 1945-46 season will be much smaller than a year earlier.

## FRUIT

**W**ITH the advance of the spring season, new-crop deciduous fruits will become available in increasing quantities. Supplies of fresh strawberries will reach a peak in May, and cherries, peaches, apricots, and plums should become available in substantial volume by mid-June. It is unlikely that the cherry, peach, and apricot crops will be as large as the very large crops of last year. Prospective production of deciduous fruits in the Eastern States was reduced somewhat

by the severe freeze of early April, but a large production still is expected.

Although new-crop deciduous fruits will become available in increasing quantities this spring, they are not likely to surpass citrus fruits until late June or early July. Then, too, storage apples from the 1944 crop are expected to be of considerable importance until late spring. Supplies of oranges and lemons are expected to remain plentiful all spring, but supplies of grapefruit will continue to decline seasonally.

Above-normal quantities of eastern apples were carried into the spring season. To aid in the disposal of such apples, the War Food Administration purchased substantial quantities for utilization in the school lunch program and in charitable institutions.

Prices for fresh fruits the past month have been generally at ceiling levels, except for eastern apples.

## TRUCK CROPS

**T**RUCK crops have developed 1 to 3 weeks earlier than usual along the Atlantic coast from Georgia to New Jersey and about 2 weeks earlier than usual in Texas. On the other hand, delayed growth and planting have resulted from excessive rain in Louisiana, Arkansas, Alabama, and Tennessee, and from cool weather and intermittent rains in California.

While the prospects for total vegetable production this year are still favorable, locally important developments have altered the usual pattern of movement of vegetables to market. Prolonged hot, dry weather in southern Florida has seriously curtailed production of snap beans, cucumbers, potatoes, and tomatoes while northern Florida has not had enough rain. However, supplies of truck crops on the fresh market in May are expected to be equal to or larger than supplies at the same time last year for all important crops except asparagus, cauliflower, new crop onions, and spinach.

Market prices for most truck crops have moved up from their declines of

late winter and probably will show considerable strength throughout May. However, seasonal declines in price are expected for the majority of the fresh vegetables 'this summer, and may reach their lowest point in September.

Prospects at this time are reasonably favorable for an adequate production of snap beans and sweet corn for processing. With only average loss of acreage planted, and with 10-year (1934-43) average yields per acre, the planting of acreages indicated by the April 1 intentions of processors would result in 1945 crops for processing larger than in 1944 by 7 percent for snap beans and by about 18 percent for sweet corn. Farmers are being encouraged to meet the processing-crop acreage goals for snap beans, sweet corn, green peas, and tomatoes by the maintenance of support prices as high as last year.

## POTATOES

**M**OVEMENT of 1944 crop potatoes out of storage this past winter was hampered by adverse weather conditions and car shortages. While that situation plus Government procurement activity created an acute temporary scarcity of potatoes for civilians, it also served to extend available supplies beyond the time they otherwise would have become exhausted. While inland and Western areas of the country still lack adequate supplies, the major cities in Eastern States have been able to get moderate supplies which have moved generally at ceiling prices.

New potatoes have not provided as much relief to the short supply situation as was hoped earlier. While shipments were available from some of the Southern and Southeastern States about 2 weeks earlier than usual, frosts and cold, wet weather checked crop growth in California.

When new potatoes become available in sufficient volume, perhaps before the end of May, market prices of both old-stock and new potatoes are expected to recede from their current ceiling levels.



A 1945 potato crop slightly larger than the 379 million-bushel crop of 1944 is in prospect, based upon intended acreages of farmers and average growing conditions. In contrast, a sweetpotato crop considerably smaller than last year's 71 million-bushel one now seems likely.

## COTTON

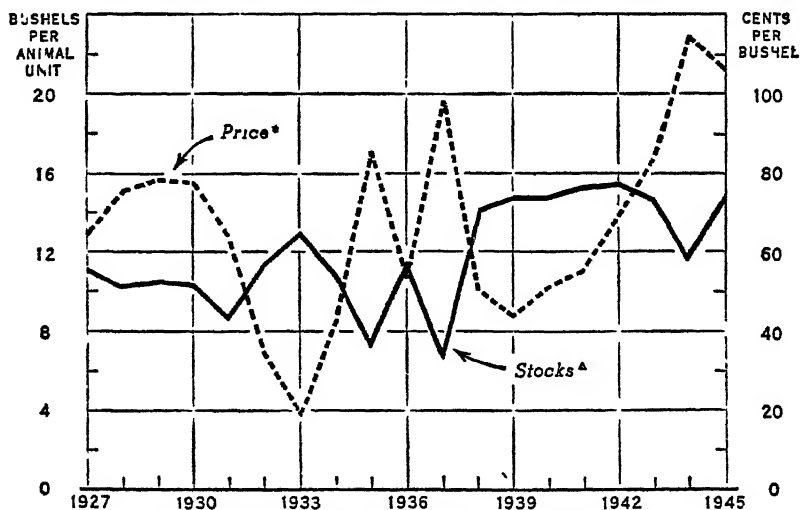
**D**URING April the International Cotton Advisory Committee held its fourth meeting in Washington. The last previous meeting was in April 1941. The 10 member producing areas represented were Brazil, British Exporting Colonies, Egypt, French Exporting Colonies, India, Mexico, Peru, Turkey, Union of Soviet Socialist Republics, and United States.

During this meeting the Committee went on record as finding "that a burdensome world surplus of cotton exists" and that "an effort should be made to solve the problem of surplus

stocks and of surplus production by international collaboration."

As a means of pursuing the problem further, the Committee recommended to the Governments of Brazil, Egypt, France, India, United Kingdom, and United States that they appoint within one month representatives to serve as a special study group, said group "as soon as appointed, organize and begin work on a report to be presented to the Governments represented on the International Cotton Advisory Committee within three months of the date of the first meeting of the study group, the report to include definite proposals for international collaboration." It was also recommended "that as soon as practicable after the submission of the report of the study group to the Governments represented on the International Cotton Advisory Committee, the Committee be convened to consider the report and take such action on it as may be deemed to be appropriate."

**CORN: AVERAGE PRICE RECEIVED BY FARMERS, AND STOCKS PER ANIMAL UNIT, UNITED STATES, JANUARY 1, 1927-45**



\* AVERAGE OF THE DECEMBER 15 AND JANUARY 15 PRICES RECEIVED BY FARMERS  
 ^ EXCLUSIVE OF STOCKS AT INTERIOR MILLS ELEVATORS AND WAREHOUSES

# Fish Production Outlook for 1945

THE year 1945 has brought the greatest market demand for fish the industry has witnessed since the beginning of the war. This is easily understood: The growing scarcity of other protein foods—meats, poultry, dairy products. As a result, the fisheries, which have been hard at work during the 3½ years of war supplying not only food but a variety of essential byproducts, are now being called on to produce even more heavily to make up the lack of other foods on American dinner tables.

Will the industry be able to meet the demand? An honest answer to the question would be "yes, and no." There will be more fresh fish, barring unforeseen interruptions to production, than in several years. But there will be a smaller pack of canned fish than last year, and of this reduced pack the civilian will get an even smaller percentage. Fish meal for animal feeds will be short. So will fish oils for animal feeding and for industrial uses. Thus the over-all production in 1945 should be the largest since the war began, even though there will be distinct shortages in several classes of fishery products.

## Peak Season Summer-Fall

While it is possible to predict the year's catch with fair accuracy, it is not actually known how production is running until September or October. This is because the fisheries are relatively inactive during the early months of the year, when winter weather makes operations difficult in many areas. Fishing picks up in the spring, reaches a peak in the summer and early fall, tapers off again toward the end of the year.

The bulk of production in the New England fisheries, which supply the greater part of the Nation's fresh fish markets, comes in the summer, although these fisheries actually operate throughout the year, in all kinds of

weather. The salmon catch, second largest among all the Nation's fisheries, is made in the summer and early fall, when the salmon are running in the rivers of Alaska and the Northwestern States. Largest catches of pilchards or Pacific sardines—the nation's top-ranking fishery in terms of yield—are made in the fall and early winter off the California coast.

## 4-Billion Pound Output

In normal times the fishing industry brings to market about 4.4 billion pounds of fish, taken all the way from Nova Scotia to the Gulf of Mexico and from Western Alaska to the waters off Ecuador. In 1942, because of the difficult conditions of wartime operation, the catch declined to 3.7 billion pounds. In 1943 the industry was able to increase its production to 4.0 billion, and last year it did still better, 4.4 billion pounds. Total production in 1945 should be about normal, although this does not mean "normal" production of all classes of fishery products.

Normally, about a third of the industry's total catch, or some 1.5 billion pounds, goes into cans. The chief canned fish industries are those for salmon, sardines, tuna, and mackerel. Another 1.1 billion pounds is sold in the fresh or frozen state. A small amount—some 150 million pounds—is cured. The largest single item, however, is the quantity made into meal, oil, and other byproducts—1.6 billion pounds.

Fish meal is one of the principal protein feeds for hogs and poultry; liver oils, as is well known, play an important role in the nutrition of human beings and livestock; other fish oils serve a long list of useful purposes in industry and art. Miscellaneous byproducts include crushed shells for poultry feeding and road construction, pearl essence, buttons and various ornamental objects.

The fishing industry was directly and immediately affected by the war. Only by constant effort on the part of the industry and the governmental agencies related to it has it been possible to maintain production at anything approaching normal levels.

About 95 percent of the total fishery production comes from the oceans and coastal rivers—from areas which were, in a sense, war zones from the very beginning of hostilities. Necessary security regulations placed hampering restrictions on the movements of fishing vessels. Mine fields had to be laid, or target areas located, in some of the best coastal fishing waters. Active submarine warfare invaded the fishing grounds of both coasts.

#### **Acute Shortages Handicap Industry**

The greatest single blow to the fishing industry was the requisitioning of about 700 vessels by the Army and Navy for military service immediately after Pearl Harbor. These included many of the industry's fastest, most productive boats. The loss temporarily placed severe handicaps on the salmon, tuna, pilchard, menhaden, and New England vessel fisheries, which yield the bulk of the industry's production. Only within the past year have enough boats been returned, or been replaced by new construction, to restore the fleet to approximately its prewar catching capacity.

Shortages of gear and operating equipment have also held down fish production. For many months, netting was critically short. For many types of camouflage, fish nets are considered the best material in the world. The output of most of the principal netting manufacturers, therefore, has been diverted to camouflage uses. It has required the most careful planning and scheduling, and much patching and mending of old nets, to keep enough on hand for the fishing boats. Manila, the cordage best suited to marine operations, was another war casualty—the source of supply was shut off when the Japanese occupied the Philippines.

The shortage of men, both on fishing boats and in the shore plants that process fish, has been troublesome throughout the war. It is growing more acute. For the most part, only absolutely irreplaceable men, such as captains and mates, have been granted deferment. It has been impossible to keep enough men in the processing plants to handle the fish as they come in.

The fact that the fleets have been largely restored to their prewar size, while the general manpower situation grows more acute, is the key to the present fish situation. With the boats back, the industry is able to bring in the fish needed. But with manpower critically short, especially in the shore plants that process the fish, it is not possible to put as many fish into cans, to fillet and package as many fish, or to process as many into meal and oil, as the industry would like to. This explains the prediction of an abundance of fish for the fresh fish markets—fish sold as they are received from the boats, with little or no further processing. It explains why the fish products that result from a more or less elaborate manufacturing process will be relatively scarce.

#### **1945 Output Up Thus Far**

The general trend of fish production during the early months of 1945 has borne out this expectation. For the first quarter of 1945, the New England catch was about 21 percent larger than during the same period last year. Heavy landings should continue during the spring and summer months. This will mean plenty of haddock, cod, rosefish, flounders, hake, and whiting for normal demands. Many sections remote from the New England coast will find their food problems eased as a result of the larger catches in this area.

The 1945 fishing season in the big canned fish industries is not yet under way. But, regardless of the size of the pack, canned fish for civilians will be scarce. For the 1945 season, increased needs for the military services,

relief agencies, and other Government claimants have made it necessary to reserve 80 percent of the pack of sardines (both Pacific and Atlantic), Atlantic sea herring, mackerel, and salmon, leaving 20 percent for civilians.

Production of fish meal and fish oil will also fall short of the mark this year. The War Food Administration has asked for production of 265,000 tons, although this figure is considerably less than the actual need. Because of the shortage of workers in the reduction plants, actual output will probably be nearer 200,000 tons. The production of fish oil, manufactured as part of the same process, will be correspondingly low.

### Postwar Outlook

Looking beyond 1945, and even further to the postwar period, important and significant developments are expected in the fisheries. American

per capita consumption of fish in pre-war days averaged only about 13.3 pounds, but varied widely from about 30 pounds in coastal cities to negligible quantities in many sections of the interior. Technical progress will change this. Quick freezing will revolutionize the marketing of fish as it has already done for fruits and vegetables. Fishing vessels will dress, freeze, and package fish at sea, arriving in port with a high quality product ready for market. Air transportation will carry ocean fish and shellfish to interior communities within a few hours' time.

Such advances—and many similar ones are already planned for the postwar period—will make the fishery resources of America more widely available to all citizens.

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## Insect Pest-Damage Prospects

THE present picture of pest damage this spring and summer is as usual a mixed picture—weather from now on, whether hot or cool, rainy or dry, is very likely to encourage some pests while reducing others. To the question, which pests will increase and what crops will be attacked, no clear-cut answer can be given, but the pest situation is potentially dangerous and bears watching. Decisions made now to get prepared against pest outbreaks may save many crops and reduce serious losses. Chances are that farmers may have more trouble and losses than usual from crop and livestock pests this season. Greater care will be required in many crop areas to combat the building up of pest outbreaks. At least that is what pest control experts are saying. Several reasons are given for these conclusions.

For one thing, the crop season begins with the highest potential for insect abundance and damage to certain crops in many years. Insect surveys conducted last Fall by Federal and State entomologists showed that unusually large populations of several serious crop pests went into hibernation. Observations this spring show that many, such as chinch bugs, boll weevil, codling moth, and screwworm begin this season with the largest overwintering population in many years. This is due to fall and winter weather favorable to survival until spring. Potentially, crop damage from many pests in 1945 can seriously imperil per acre yields and production goals. This potential threat of crop loss is made more real and urgent because of the ability of insects to multiply in enormous numbers following the early

development this spring, and, if weather continues favorable, to build up very rapidly in outbreak numbers.

In south Texas, screwworms are already increasing to threatening and destructive levels, and are now attacking cattle there. Generally warm weather will favor a northward spread in outbreak numbers.

Chinch bugs are now in small grains in greater abundance than in the outbreak year of 1934, when this pest caused losses of 30 million bushels of corn and over 28 million bushels loss of small grains. Due to the early spring, chinch bugs may mature so rapidly in small grains that they will be able to fly over all barriers in overwhelming numbers into the young succulent corn. Of course, driving rains just when young chinch bugs are emerging in May or early June might destroy many of them and reduce injury to corn. Not relying on this off-chance of adverse weather, Congress has appropriated over a million dollars to help combat chinch bug migration to corn fields.

### **Many Pests Early This Year**

Continued warm weather, too, during the spring and summer would favor the destructive Mexican bean beetle, European corn borer, grasshoppers, codling moth, and various aphids. The codling moth, now emerging 2 weeks early, may have a long season. In some regions the moths may produce one more generation than normal, late in the season. As a result, the worms may be excessively abundant before harvesting time, increasing apple losses. In areas where cold weather has decreased the apple crop, relative insect losses may be even greater this year, for there may be more apple worms per apple.

The potato leafhopper has already caused major bean crop losses in the South, partly because of lack of labor for control measures: This pest may now migrate out of the South earlier this year, so that bean and potato

crops may be seriously attacked earlier than usual.

The pea aphid is building up in larger numbers than usual in alfalfa and clover; it may move to the pea fields earlier this season, causing great damage when pea crops are most vulnerable to insect attack.

It is of course true, that unfavorable cool or rainy weather, particularly in April or May, may stop increases in many crop pests, in some cases for the entire season. Grasshoppers may be practically wiped out by heavy rains and cool weather at certain times. This is true of other cereal and forage pests, if the adverse weather happens to come when eggs are hatching, or when the young are very weak.

Other crop pests are increased by relatively cool temperatures. Several injurious species of aphids, attacking vegetable, cereal, forage, and cotton crops mainly, may develop more rapidly at temperatures that are low enough to retard the attacks of their natural enemies; this would result in increased damage to many crops. Cooler temperatures favor boll weevil. Hot dry weather, favorable to many pests, will reduce boll weevil damage, as it did in 1944.

### **Reliance on Weather Not Enough**

An early spring, such as occurred this year, often advances the insect hatching season, and contributes to heavy populations. Frequently, it will result in the build-up of larger numbers of some crop pests and will aggravate the season's crop losses. This result can follow even though followed by occasional weeks of cold, freezing, or rainy weather. This is because many insect pests have now emerged earlier from winter quarters, due to premature favorable weather and will grow faster, and multiply more rapidly in continued favorable weather, even though temporarily checked by occasionally adverse conditions.

Another reason for taking special care this season to combat building up

of pest outbreaks, is that adverse weather in many areas, under current insect conditions, cannot be depended on to protect crops from all pests.

### Annual Pest Damage Enormous

In fact, surveys and the existing data on annual insect damage show that only rarely, even when pest populations are low, has it been safe to rely on the weather to protect crops. From 1923 to 1943, the combined annual loss of cotton lint and seed resulting from insect damage averaged more than \$145 for each of the Nation's 1,066 000 cotton farms. Cotton pests take over a million tons of cottonseed each year. Despite meat rationing and need for leather, livestock owners make a yearly tribute to screwworms of meat and hides from over 260,000 head. Annually, the hessian fly destroys over 17 million bushels of wheat which could otherwise help feed our soldiers or the starving peoples in liberated countries. And chinch bugs consume more than 15 million dollars worth of corn.

Yearly preventable food loss from truck crops is also very great. After taking actual cabbage crop records in the South, it was found that the cabbage rendered unmarketable by the feeding of cabbage worms on each acre was sufficient to supply 148 persons for 1 year. If marketed, this would make a nice profit for the farmer.

In California, loss of tomatoes by the tomato fruitworm amounted to a half ton of canned tomatoes per acre, which is sufficient to supply 125 persons for 1 year.

In addition to food loss, amounting to some three billion dollars every year, there is the loss of farm labor, fertilizer, insecticides, and other materials used on wasted acres, and the loss of soil fertility on acres now over-used to meet production goals. Better insect control would be instrumental in achieving the same production yields with less labor and better conservation of soil. Year after year, preventable insect damage has been a significant

### Insecticide Outlook

**S**UPPLIES of insecticides, fungicides, and other materials entering into the control of insects and plant diseases will in general be tighter in 1945 than in previous years. This situation is the result of a scarcity of materials going into their manufacture, labor shortages, inadequate supply of containers, and delays in transportation, and reduced carryovers.

The supply picture for most of the standard materials as it now appears follows:

#### Very tight supplies:

- Nicotine.
- Paradichlorobenzene.
- Paste and dry wettable sulphurs.
- Sodium cyanide.
- Tartar emetic.

#### Tight supplies:

- Calcium caseinate.
- Copper carbonate.
- Monohydrated copper sulphate.
- Copper oxides.
- Fixed coppers.
- Cresols and phenols.
- Pyrethrum.
- Rotenone.
- Organic sulfur.
- Micronized sulfurs.
- Zinc compounds.

#### Tight to adequate:

- Copper sulfate.
- Formaldehyde.
- Lead arsenate.
- Paris green.
- Seed protectants.
- Thiocyanates and other chemical extenders.
- Wettable spreaders and stickers.

#### Probably adequate (usually so only if ordered in time):

- Borax.
- Calcium arsenate.
- Calcium cyanide.
- Carbon bisulfide.
- Chloropicrin.
- Cryolite.
- Ethylene dichloride.
- Fish oil soap.
- Liquid HCN.
- Methyl bromide.
- Oil sprays.

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cost factor in production of all major crops.

Another cause of more trouble and losses than usual from crop and livestock pests this season is the expected scarcity of many insecticides.

But there is an adequate amount of calcium arsenate and farmers should have no trouble getting supplies if ordered in advance. Cotton farmers, particularly, cannot depend on hot, dry weather throughout the Cotton Belt to reduce boll-weevil damage this season as they did last year. To be safe, they should order now all the calcium arsenate they will need. Deliveries of insecticides during periods of peak demand—when insecticides are most urgently required—when insects are doing the most damage—are likely to be slow, due to transportation and manufacturing difficulties, complicated by the manpower shortage.

For other insecticides, which are adequate for an average season of careful use, but not as plentiful as calcium arsenate, deliveries should be carefully spaced throughout the season. But farmers will help assure adequate distribution of supplies if they will place orders now for future delivery of insecticide supplies they may need. This will make it more certain that adequate stocks will be on hand locally when required on their farms. If farmers wait to order insecticides until the pests are actually attacking crops in serious numbers it is not likely that deliveries can be made in time.

Farmers should make frequent observations of the increase of insects that attack their crops. This involves making a small sample count of insect pests found in or near cultivated fields each week. For common pests in most localities, this does not take much time or work, if the farmer knows what pests to look for, and how to make quick small-sample observations. 4-H Club boys and girls make weekly observations for local cotton pests. Many farmers who are unfamiliar with local insect pests can quickly learn to recognize the few injurious pests usually present on their farms.

Farmers who keep weekly insect pest records for their own farms have been able to realize large savings not only by increased per acre yields and in better grade products, but in more economical use of pest control materials. Without such records, many farmers cannot know what pests are building up in large numbers to attack their crops. Often they act too late to prevent serious damage that could have been prevented. This season, due to the early spring which has developed unusual insect populations from a high potential, the keeping of a weekly record and the use of insect observations on individual farms is particularly needed to protect crops.

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## Rayon Production in Recent Years

**F**ROM a very small production during the last war, world rayon output increased rapidly after 1920 and continued to expand even during the depression. The 1933 output was 60 percent more than in 1929. At the outbreak of the present war in Europe, world production of all types of rayon totaled 2.2 billion pounds, equivalent to about 5 million bales of cotton—

assuming 425 pounds of rayon is equivalent to one 478-pound bale of cotton—and by 1942 rayon production was equal to roughly 8¼ million bales of cotton. Of this amount about

NOTE.—These and other comparisons in terms of raw cotton "equivalents" are in no sense intended to imply a displacement by rayon of the equivalent amount of cotton. For a fuller discussion of this and other aspects of the subject, see *Synthetic Fibers in Relation to American Cotton*, by the authors, which was issued by BAE in January 1945.—Editor.

three-fourths was in areas then under Axis control. This world total compares with a total production in 1920 equivalent to 78 thousand bales and represents an increase from a negligible proportion to the equivalent of nearly one-third of the world's consumption of cotton.

World production of rayon staple fiber was quite small prior to 1931 but by 1939 was equivalent to about one-half of the total production of rayon and by 1942 the estimated production of over 2 billion pounds represented about three-fifths of the total rayon production.

#### United States Increase Greatest

From 1920 to 1935 production in the United States increased by a greater absolute amount than in any other country and reached 262 million pounds in 1935. During the same period rayon production in the United Kingdom, Germany, Japan, and Italy showed roughly the same general trend, with production in each of these countries increasing up to a level between 120 and 240 million pounds in

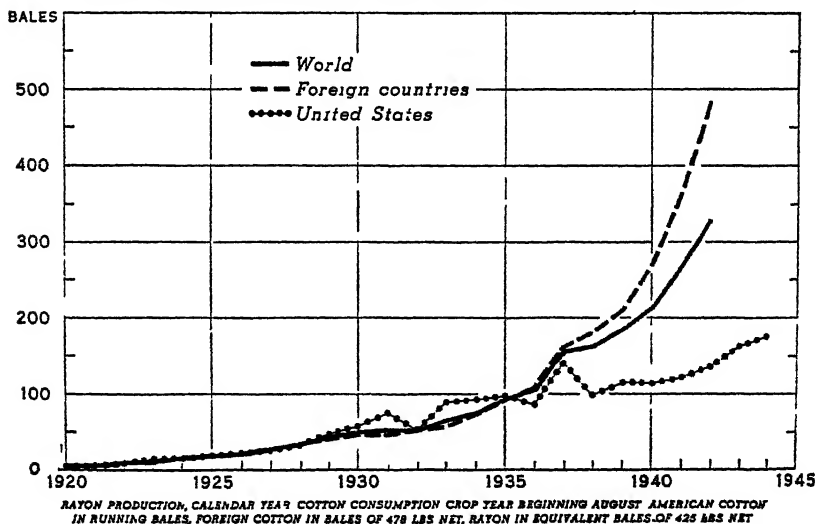
1935. In the late 1930's production in Japan, Germany, and Italy increased under the stimulus of nationalistic policies designed to reduce dependency upon imports of cotton and other fibers as well as to conserve foreign exchange. In 1936 Japan became the world's largest producer only to lose the lead to Germany in 1939.

By 1938 United States was using more rayon than any other fiber except cotton. In 1944 domestic production totaled 724 million pounds, the equivalent of 1.7 million bales of cotton, with rayon staple fiber accounting for 23 percent of the total.

#### Big Output for Military Tires

During the war much of the increased domestic production has been in high tenacity, high strength rayon for use in military tires. Rayon tire fabric production has jumped from about 7 million pounds in 1939 to between 120 and 130 million pounds in 1944, and is expected to reach 240 million pounds during 1945. Such an output is approximately a fourth more than the annual tire fabric output of all fibers during the five prewar years,

PRODUCTION OF RAYON PER 1,000 BALES OF COTTON CONSUMED, UNITED STATES, FOREIGN COUNTRIES, AND WORLD, 1920-44





1935-39. This 1945 production is roughly equivalent to 750,000 bales of cotton.

The development of this type of rayon has important implications for the future, with respect to both continuous filament yarn and staple fiber. There are perhaps other technological developments occurring during the war period, in the production of both rayon and other synthetic fibers, which also may be important to synthetic fiber production in the years immediately ahead.

### **Declining Prices, More Uses**

A downward trend in rayon prices, which has been closely associated with the technological improvements in rayon production and increased manufacturing efficiencies, has contributed much to the rapid increases in rayon consumption and to the utilization of rayon for an increasing number of uses. Prices of the heavily used 150 denier viscose filament yarn fell from the all-time peak of \$6 a pound in early 1920 to 49 cents in the summer of 1938. Since then the price has ranged between 51 and 55 cents per pound.

Domestic prices of rayon staple fiber have declined considerably since it first was introduced on a sizable scale in the late 1920's. Quotations for standard type viscose staple fiber declined steadily from 60 cents a pound in each of the crop years 1928-30 to 25 cents a pound in October 1937, and have been at that level or slightly lower since then.

The fact that the price of rayon staple fiber is the same irrespective of staple length places it in sharp contrast with cotton for which prices rise sharply as staple length increases. Furthermore there is somewhat more waste in spinning cotton than rayon staple fiber. On the basis of the price per pound of usable fiber, rayon staple fiber is now priced more advantageously relative to cotton than ever before. In fact, the qualities of cotton most directly in competition with rayon staple fiber from the standpoint of use, currently sell for more than

the latter. Rayon staple fiber also has certain other advantages over cotton among which are (1) greater simplicity of handling in the early stages of yarn manufacturing; (2) freedom from dust; (3) greater price stability and (4) complete uniformity in quality.

### **Possible Postwar Trends**

In view of the sharp upward trend in rayon production and consumption in the past 35 years and the continuing technological improvements of recent years, there seems every reason to expect that the upward trend in synthetic fiber production will continue well into the postwar period and provide tremendous competition for cotton. The annual rate of increase, however, will, no doubt, be very much less in the future than for the 10 years ended 1942, when the average annual percentage increase in total rayon production was 18 and 22 percent, respectively, for the United States and for foreign countries. If the annual average percentage increase following 1942 were only half as great as in the previous 10 years, the United States production of rayon in 1952 would be "equivalent" to 3 million bales of cotton and the total world production would be equal to 22 million bales of cotton. The latter would be only one-fifth less than the 1935-39 average annual world mill consumption of 28½ million bales of raw cotton. Even with a much higher peacetime level of consumer incomes than in the past, it seems improbable that consumers throughout the world could increase their purchases of textiles sufficiently by 1952 to provide outlets for the above quantities of rayon and at the same time provide outlets for a large proportion of the cotton, other natural and synthetic fibers, and paper that could be produced.

Most foreign rayon producing countries were formerly important cotton manufacturing countries importing a large part of their raw cotton requirements. In these countries the production of rayon textiles instead of cotton

textiles permits important savings in foreign exchange. The principal source of cellulose—the basic material for rayon—is wood pulp which is usually available to these countries at costs equivalent to not more than 4 or 5 cents a pound of fiber and often with no expenditure whatever of foreign exchange. Also, countries with well developed chemical industries have available domestically nearly all of the other materials needed in rayon production.

In the event postwar international trade and monetary relations are such that foreign countries are hard-pressed for foreign exchange, the governments of these countries may limit the importation of cotton and other natural fibers and in other ways encourage increased production of rayon and other synthetic fibers. Where unemployment is a problem, the additional labor involved in producing rayon may also give foreign governments an incentive to encourage rayon production and consumption at the expense of cotton which must be imported.

Where unemployment is a problem, the additional labor involved in producing rayon may also give foreign governments an incentive to encourage rayon production and consumption at the expense of cotton which must be imported.

The trend of rayon production in the United States is also expected to continue upward, but the annual percentage increase also probably will be less than in the past. The same seems to be a reasonable expectation in regard to total domestic synthetic fiber production, even though nylon and some of the other synthetic fibers may expand at a very rapid rate in the years immediately ahead. The actual annual increases are expected to continue relatively large, particularly in the case of staple fiber for which the potential market seems large and where relatively little commercial advantage has been taken of certain recent technological advances such as the development of high strength fiber. The extent of the increase in synthetic fiber production will be influenced by the extent of further technological developments in synthetic fiber manufacture and, particularly in rayon staple fiber and by domestic prices of synthetic fiber, cotton, and wool. To a lesser degree the increases may also be influenced by technological developments in processing and marketing of cotton and wool.

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## Wartime Changes in Livestock Numbers

**L**IVESTOCK numbers began declining last year from the all-time peak reached on January 1, 1944, and by the first of this year were on their way downward to more normal levels. At the 1944 peak the numbers of cattle, hogs, chickens and turkeys were the largest ever reached, but the number of sheep were considerably below the all-time peak of 1942. Horse and mule numbers were, of course, sharply down from their peak reached nearly 30 years ago.

The decline during 1944 was general, with numbers of all species of livestock

at the end of the year smaller than at the beginning. The sharpest relative declines were in hogs, chickens and sheep—horses and mules continued downward at a little faster rate than the average of the last 20 years—while decreases in cattle and turkeys were small—less than 1 percent.

### Animal Units

Because of the great differences among the several species of livestock in size and feed requirements the only way these varying changes can be measured in terms of all livestock is to convert the different species to a

common denominator—called an animal unit. In terms of animal units, which allow for these differences in size and feed requirements, the peak of number of January 1, 1944, was equivalent to 104,502,000 units. By January 1, 1945, numbers were down to 98,456,000 units, a decrease of about 6 percent.

In terms of the same units the nearest approach to January 1, 1944, was on January 1, 1918, with 104,233,000 units. While there was a difference between the two years of only about 2 percent in these total units, there was a marked difference in the make-up of the total. In 1918 horses and mules made up 26 percent of the total and meat animals 74 percent. In 1944 horses and mules made up only 13 percent of the total and meat animals 88 percent. In other words a decrease of 48 percent in work animals was accompanied by, and to a large extent made possible, an increase of 18 percent in meat animals.

### Horses and Mules

The future of horses and mules on farms at present is not very promising. It is certain that the numbers of each will continue to decline. The growing shortage of manpower on farms during the past 5 years has further encouraged the shift from animal power to mechanical power. The demand for horses and mules has declined, their prices have dropped and breeding is at the lowest level in many decades. The number of horse colts raised in 1944 was 12 percent smaller than in 1943, only about 45 percent as large as in 1937 and probably the smallest in 70 years. Contrary to the general war-time rise of farm product prices the value per head of horses has declined during the past two years, after having advanced sharply during 1943, and on January 1, 1945, was the 6th lowest in 40 years.

In some respects the situation of mules is more favorable than that of horses. Compared with the peak, mule numbers on farms on January 1,

1945, were down about 42 percent while horses were down 58 percent. While the value per head of mules on January 1, 1945, was somewhat below a year earlier it was still more than twice as large as the low of the depression years and was exceeded in only 3 other years.

The demand for mules in the cotton and tobacco States has continued good and numbers in these States have declined only moderately, especially in the South Atlantic and East South Central States. Because these States raise relatively few mule colts, mule numbers have been maintained at the expense of numbers in the States that are the source of replacements. But with the sharp drop in numbers, both of mules of working age and mule colts in these supply States, before many years it may become increasingly difficult to obtain replacements for the Cotton Belt.

### Cattle

Cattle numbers continue at a very high level, down only a little from a year earlier, and this despite much the largest yearly slaughter of cattle and calves on record during 1944. Undoubtedly much of the land that was formerly used for producing feed for horses and mules is now being utilized for cattle production. While cattle numbers on January 1, 1945 were about 10 million head larger than in 1919 the total number of cattle, horses and mules was over 4½ million head smaller than in 1919—and was about 3 million head larger than in 1934, the peak of the previous cattle number cycle. But as was evident in 1919 and in 1934, such a level of numbers cannot be maintained in face of short feed production. Even with a drought no more widespread than that of 1919 the cattle industry would be faced with a serious feed problem and a drought as severe as that of 1934 would bring disaster.

The problem facing the cattle industry is how best to reduce numbers to a safer level—both from the stand-

point of feed supplies and from that of possible price declines. It is certain that in no non-war year could a volume of cattle and calves such as was marketed in 1944 have been moved except at very low prices. At best, there is no certainty that such a volume can be marketed after the war, except at much lower prices. But in view of the meat situation in prospect for 1945 it seems probable that a considerably larger volume could be moved at relatively high prices.

### Hogs

Hog numbers made the largest drop on record in 1944—down over 23 million head. And the percentage drop between January 1, 1944, and January 1, 1945, of 28 percent was exceeded only in the drought year of 1934. This decline in hog numbers resulted from several conditions—the very tight feed situation during the first half of 1944, the difficulties encountered in getting the record pig crops of 1943 marketed, the rather unfavorable outlook for the 1944 corn crop early in the season, the shortage of competent farm labor, and other wartime difficulties.

The 60,660,000 hogs on farms January 1, 1945, however, was 15 percent larger than the 10-year (1934-43) average and was exceeded in only 4 years since 1930. But this number and the prospective spring pig crop in 1945 promises to be quite inadequate to meet the wartime needs for pork.

### Sheep

Conditions associated with or growing out of the war efforts seem to have affected the sheep industry more adversely than any other livestock enterprise. From an all-time peak for numbers of stock sheep reached on January 1, 1942, numbers on farms decreased moderately in 1942 and sharply in 1943 and 1944. January 1, 1945, numbers were down 8¼ million head or 15 percent from the 1942 peak and were at the lowest level since 1928. This drop was a direct result of the liquidation of breeding flocks

and was accompanied by record marketings of ewes and ewe lambs.

In the Western Sheep States range operators were particularly hard hit by the growing shortage of experienced labor, the high level of wages, the high cost of supplies and increasing losses from predatory animals. But the tendency to reduce numbers was as marked with growers in the Native Sheep States—especially in the Corn Belt region—as with range operators. The causes of the declines with these producers are less clear. Perhaps many of them felt that the sheep enterprise offered less promising returns than other livestock, getting sheep shorn became increasingly difficult, and with others it may have been a case of having to reduce the work and worry load somewhere and sheep were most readily eliminated.

Reports from farmers indicate that much of the reduction in sheep numbers in the farming States was caused by producers giving up sheep raising entirely, with a noticeable decline in the percentage of farms keeping sheep. With growers everywhere it is probable that the rather unfavorable outlook for wool in the post-war period may have influenced actions.

### Chickens

The conditions that caused the drop in chicken numbers were largely the same as those that brought about the reduction in hogs. The relative decline in chickens was much less than with hogs—11 percent as against 28 percent—but the number on January 1, 1945, compared with the 10-year, 1934-43 average number was about the same with both—118 percent with chickens and 115 percent with hogs. With a greatly improved feed situation, compared with a year ago and a materially better condition as regards storage together with a record demand for eggs and chicken meat the outlook for the chicken and egg producer is quite different.

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# How the Corn Crop is Harvested

**M**ETHODS of harvesting corn, the Nation's leading crop, are many and varied, depending largely on how the product is to be used and on how the land is to be used the following year. In addition, the acreage of corn per farm, the kind and quantity of labor available, and the relative harvesting costs are important factors which determine the practices and machines used.

Huge wartime crops of corn, together with critical labor shortages, have necessitated changes in the processes of harvesting the crops. The shifts have been chiefly toward those practices which would allow for harvesting of silage as well as an increased production of corn for grain with a minimum amount of labor. Some shift from cutting and shocking to harvesting from the standing stalk has also taken place.

The use of machines for harvesting corn has been stepped up under wartime conditions. Both skill and physical strength are necessary for harvesting by hand methods, but large numbers of younger men, the more efficient harvest workers, have left the farm either for the armed forces or for wartime industries. Shortages of labor for corn harvesting have been widespread. And the shortages have been felt most keenly in the Corn Belt and the more humid areas of the Great Plains where corn acreages per farm are large and where the per-acre corn yield is usually above the national average.

This labor problem would have been even more pronounced but for the relatively large output of corn pickers since 1942. From about 130,000 on January 1, 1942, the number of corn

pickers had increased by nearly 30 percent, to about 168,000 on January 1, 1945. Increasing their use by expanding the acreages per machine, often by doing custom work, has also been an important factor in getting the work done both quickly and economically.

## Harvesting from Standing Stalk Leads

A Nation-wide study shows that more than 75 percent of the 1943 corn acreage was picked, husked or snapped from the standing stalk, either by hand or with the field corn picker. This is the lowest-cost harvest method when the corn is to be stored, and requires less labor than any other method except hogging and grazing. Harvesting from the standing stalk has long been the leading method in the central and western Corn Belt, where the storing of corn roughage for winter feed has not been important, as well as in the South where often the corn leaves and tops are saved for forage. Harvesting from the standing stalk has become of increased importance in the eastern Corn Belt and other eastern areas in recent years, largely because of the increased use of pickers and farm labor shortages.

More than 90 percent of the 1943 corn acreage of Iowa and Illinois, Texas, Louisiana, Mississippi, Alabama, and South Carolina was handled in this manner. Harvesting from the standing stalk was also above the national average in Indiana, Nebraska, Kansas, and some Southern States.

Hand methods continue to dominate in the harvesting of corn. Slightly more than half of the total 1943 corn acreage was husked or snapped by hand from the standing stalk. This method was employed on more than 90 percent of all corn acreage in Oklahoma, Texas, and the Delta States, and on over 50 percent of the corn acreage in the Great Plains and Southeastern

NOTE.—A fuller discussion of corn harvesting methods will be found in *Harvesting the Corn Crop*, by the authors, which was recently issued by BAE.—Editor.

States. On Corn Belt farms having less than 55 acres of corn, harvesting from the standing stalk by hand was the leading method.

#### Mechanical Pickers Harvest a Fourth

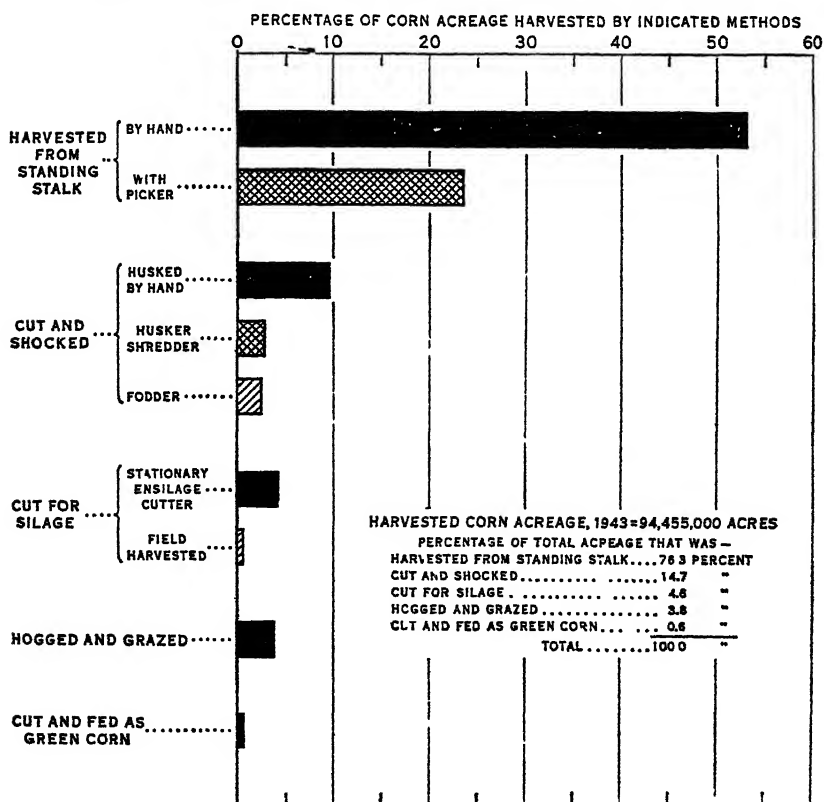
More than 23 percent of the country's corn acreage in 1943 was harvested with mechanical field pickers. Acreage harvested with the corn picker more than doubled from 1938 to 1943. Along with the increase in picker use there has been an increase in numbers of corn pickers but harvesting more acres per picker has been a chief factor. In 1944 there were at least 10 percent more pickers on farms than in 1943 and further increases are expected.

Although the use of corn pickers is

becoming widespread, they are used extensively only in the Corn Belt, the Lake States, and in humid areas of the Great Plains, where the corn acreage per farm is large and the per-acre corn yield much above the national average. Thus, in 1943, when less than one-fourth of the acreage was harvested with corn pickers, it is estimated that corn pickers harvested at least one-third of the total production of all corn. The quantity of corn picked by machine was equivalent to 38 percent of all corn harvested for grain.

Under favorable conditions the corn picker is a relatively low cost method of harvesting. Use of a two-row picker often effects a labor saving amounting to 50 percent or more, as compared with harvesting by hand from the

#### CORN HARVESTING METHODS, UNITED STATES, 1943 CROP



standing stalk. The use of the corn picker has been steadily increasing since the late 1920's when tractor power take-off machines became important. Increased plantings of relatively storm-resistant hybrids have also been an important factor favoring the increased use of corn pickers.

### Small Percentage Shocked

Only about 15 percent of the 1943 corn acreage was cut and shocked. Of all corn cut and shocked, 65 percent was later harvested by husking or snapping by hand, about 20 percent was harvested for grain with the husker shredder, while the remainder was fed as fodder corn, from which ears were not removed. However, all areas of the country reported some cutting and shocking of corn, but it was most important in the upper Ohio and Tennessee Valleys, the Potomac Valley, along the Great Lakes, and in the subhumid corn producing areas of

the Great Plains and Mountain States. And in many parts of the East Central region more than three-fourths of the 1943 corn acreage was cut and shocked.

In the South and East, nearly all of the corn cut and shocked was husked or snapped by hand. Use of the husker shredder was reported in many States, but only in Ohio, Michigan, and Wisconsin did the husker-shredder account for an appreciable part of the corn acreage. Feeding of fodder corn was relatively most important in the Northern Great Plains and Mountain States, where sub-humid conditions keep the per acre corn yield below average, and in the Pacific States. In practically all areas farmers with small corn acreages cut and shocked higher proportions of their acreage than did farmers with large acreages.

### Very Little Pastured

The 1943 survey shows that less than 1 percent of the corn acreage was

Corn Harvesting Methods and Utilization, by Regions, 1943

Regions	Corn harvested in 1943	Proportion of 1943 corn acreage <sup>1</sup>							Leaves stripped or topped for forage <sup>3</sup>	Proportion of all corn cut which was cut by hand <sup>4</sup>
		Harvested from standing stalk		Cut and shocked		Out and fed green	Hogged and grazed	Out for silage		
		With mechan- ical field pick- er	By hand	Ears husked or snapped <sup>2</sup>	Fed as fodder, ears not re- moved					
	1,000 acres	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent
Northeast: New Eng., N. Y., N. J., Pa., Del., Md.	2,897	5.8	16.7	41.5	2.3	1.4	0.5	31.8	1.4	46.6
Corn Belt: Ohio, Ind., Ill., Iowa, Mo.	31,420	48.2	35.0	11.2	1.0	.2	2.4	2.0	.2	51.1
Lake States: Mich., Wis., Minn.	9,232	34.4	16.0	18.3	5.5	.9	3.1	20.8	.6	13.5
Great Plains: N. D., S. D., Nebr., Kans.	16,687	20.2	59.2	2.3	4.5	.6	10.3	2.9	.2	10.9
Appalachian: W. Va., Ky., Tenn.	6,021	1.2	51.3	44.6	.5	.3	1.2	.9	2.8	93.0
Southeast: Va., N. C., S. C., Ga., Fla., Ala.	12,935	.3	53.2	12.5	.8	.8	1.5	.9	15.6	92.7
Delta States: Miss., Ark., La.	6,181	.2	90.1	5.7	1.3	1.1	1.4	.2	7.0	92.8
Oklahoma-Texas	7,394	1.2	91.9	2.7	1.3	.9	1.5	.5	10.8	47.0
Mountain: Mont., Idaho, Wyo., Colo., Utah, Nev., N. M., Ariz.	1,480	6.1	43.9	7.1	9.1	.5	20.0	8.3	.6	22.8
Pacific Coast: Wash., Oreg., Calif.	155	6.3	38.2	5.2	7.8	4.5	6.4	31.6	.5	57.9
United States.....	94,455	23.5	52.8	12.5	2.2	.6	3.8	4.6	3.8	49.3

<sup>1</sup> The sum of the percentages in the 7 columns below is 100 percent for each line.

<sup>2</sup> Includes husked or snapped by hand and with husker-shredder.

<sup>3</sup> Acreage from which leaves were stripped or pulled and from which tops were cut. Later the grain is usually harvested from standing stalk. The percentages are duplicated in preceding columns.

<sup>4</sup> Includes corn cut and shocked, cut and fed green and cut for silage. Complementary percentage harvested by machine.

cut and fed green. Corn fed in this manner is principally for supplementing pastures in the late summer and is mostly utilized by cattle, although some is also fed to hogs and workstock. Feeding of green corn is a minor form of utilization in the major corn States. It is relatively most important in the cotton-growing areas and the Western States and also along the northern fringe of the country where the growing season is often too short to permit complete maturity of the crop.

Harvesting corn by hogging or by grazing requires less labor than does any other harvest method. This method was used to harvest less than 4 percent of the 1943 acreage. Although hogging or grazing was reported to some extent in all areas it was relatively most important in the subhumid areas, in some of which more than one-third of the 1943 acreage was so handled. Some corn was hogged or grazed throughout the humid corn area and the practice was fairly important in the central Corn Belt. In the humid areas the hogged or grazed acreage is utilized chiefly by hogs; in the subhumid areas, by cattle. For most areas there was a tendency for farmers with large corn acreages per farm to hog or graze a higher proportion of their acreage than did farmers with small acreages.

### Silage Chiefly in Dairy Areas

Cutting corn for silage was reported in all parts of the country, but this use accounted for less than 5 percent of the 1943 corn acreage. It was relatively most important in the Northeast, the Lake States, and the Pacific Coast, where dairy cow numbers are concentrated. In some of these areas more than half of the 1943 corn acreage was cut for silage. In the South only a few areas reported using as much as 2 percent of the 1943 acreage for silage. The field harvester was used on less than one-tenth of the silage acreage, mostly on farms of large corn acreage.

Saving only a part of the corn plant for forage, either by removing the tops or by pulling or stripping the leaves, was reported to a considerable extent in the southern areas. For the entire country forage was either topped, pulled or stripped from about 3,600,000 acres. From practically all of this acreage the ears were later harvested from the standing stalk by husking or snapping. Topping or stripping corn for forage was of little importance in northern and western corn areas.

About 19 million acres of corn were cut in 1943. This figure includes that cut for silage, all that was cut and shocked and corn cut and fed green. It does not include the 3.6 million acres of corn topped or stripped for forage. For the entire country, of all corn cut slightly more than half of the acreage was cut with machines. Machine cutting of corn, usually with corn binders, but including field harvesters, cutting sleds, etc., predominated in the Great Plains, the western Corn Belt, the New England States, New York, Colorado, and Wyoming. In contrast, hand methods predominated in all Southern States, eastern Corn Belt, Appalachian States, and some of the Northeastern States.

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*Planning the Farm for Profit and Stability.* Neil W. Johnson. U. S. Dept. Agr. Farmers' Bulletin 1965, 30 pp. Washington. February 1945.

Makes use of the farm budgeting process and reflects some of the thinking on farm planning that has developed in recent years

*The Farm Real Estate Situation, 1943-44.* M. M. Regan, A. R. Johnson, and Fred A. Clarenbach. U. S. Dept. Agr. Cir. 721, 45 pp. Washington. January 1945.

In 1943-44, land values rose at an average rate of 1 1/4 percent a month, volume of sale was at record high, resales of farms after a limited period of ownership increased, and farmers continued to buy more land than they sold. Amount of outstanding farm mortgages declined further. Heavy debts developed on significant number of farms as result of sale.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100			Index of prices received by farmers (August 1909-July 1914=100)				
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities interest and taxes		Dairy products	Poul-try and eggs	Meat ani-mals	All live stock
1910-14 average.....	53	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	106	151	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	173	178	139	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	190	211	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	198	174	200	194
1944-April.....	239	327	152	175	169	292	196	151	203	191
May.....	237	327	152	175	169	-----	194	153	201	190
June.....	235	327	152	178	170	-----	192	154	200	189
July.....	231	320	152	176	170	328	194	165	197	190
August.....	232	324	152	176	170	-----	196	171	201	194
September.....	231	320	152	178	170	-----	188	179	200	196
October.....	232	320	152	178	170	325	201	190	201	199
November.....	232	318	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	234	322	153	179	172	324	202	199	203	202
February.....	235	321	154	179	172	-----	200	183	209	201
March.....	-----	-----	154	180	173	-----	198	175	211	200
April.....	-----	-----	-----	180	178	335	194	176	215	201

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio <sup>4</sup>
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1910-14 average.....	100	101	102	96	98	99	-----	99	100	100
1915-19 average.....	193	164	187	163	187	125	-----	168	102	106
1920-24 average.....	147	126	192	189	149	148	* 143	160	151	86
1925-29 average.....	140	119	172	145	129	141	140	143	149	86
1930-34 average.....	70	76	119	74	72	94	106	86	90	86
1935-39 average.....	94	95	175	83	106	83	102	97	107	84
1941.....	97	89	159	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	163	142	159	106
1943.....	148	147	325	160	190	179	245	183	192	119
1944.....	165	166	354	184	209	215	212	194	195	118
1944-April.....	171	172	352	163	207	237	220	200	196	118
May.....	170	173	350	160	208	232	225	198	194	118
June.....	165	170	350	163	210	228	231	197	193	114
July.....	161	168	350	164	209	230	195	194	192	113
August.....	156	166	355	162	209	214	186	191	193	114
September.....	155	162	358	170	207	206	166	188	192	113
October.....	164	161	357	171	211	205	153	187	194	114
November.....	165	157	368	168	215	195	188	189	196	114
December.....	167	160	364	168	215	206	228	196	200	117
1945-January.....	169	168	365	163	214	205	262	200	201	117
February.....	169	164	360	161	215	211	223	197	199	116
March.....	171	166	359	163	215	211	203	196	198	114
April.....	172	162	362	163	215	221	259	204	203	117

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

\* 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

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**F**IRST PRIORITY for food production, with emphasis on greater output of scarce foods, by providing farmers with adequate manpower and machinery is the top recommendation of the Special House Committee investigating food shortages which is headed by Clinton P. Anderson, the newly appointed Secretary of Agriculture.

\* \* \* To increase the beef supply, cattle feeders are now being paid a direct subsidy of 50 cents a hundred pounds on cattle grain-fed for slaughter, grading good or better and weighing more than 800 pounds. Likewise to increase the pork supply, the hog price support program has been broadened to include hogs of all weights instead of the previous 300-pound maximum. Slaughter subsidies on hogs and cattle have been adjusted upward. And Government meat purchases are being made on the basis of getting a more equitable geographic distribution of civilian meat supplies. \* \* \* With civilian sugar supplies down about a fifth from last year, domestic beet and cane producers are being helped to obtain adequate supplies of labor and machinery to make possible top production this year. \* \* \* Total cash receipts from farm marketings in 1944 were 19.8 billion dollars, 2 percent above 1943 receipts.

# Civilian Food Supplies for 1945

**F**OOD supplies in prospect for United States civilians this year will be more than adequate in all parts of the country to meet essential needs. Per capita supplies of all foods are expected to be 2 to 4 percent above the average level of consumption in the prewar years, 1935-39, but 5 to 7 percent below the 1944 record consumption.

Civilian demand for all foods will continue to be unusually strong. And the difficulties of distributing the reduced supplies of foods such as beef, pork, lard, butter, other fats and oils, sugar, and canned fish will increase. However, compared with prewar years, larger quantities of other nutritious foods available from commercial and victory garden production will provide more of the essential nutrients, except calories, than will be lost through smaller supplies of sugar, fats and oils, and canned fish. Thus the consumption of some fresh vegetables, fluid milk, eggs, canned fruit juices, citrus fruit, and whole grain and enriched cereal products is expected to be much larger

than in 1935-39, and a little more than in 1944.

Not only will over-all civilian consumption be maintained above prewar levels, but food supplies will also be large enough to meet heavier military requirements than in 1944. This is possible because of tremendous production of food crops and livestock in the last few years. And on the basis of present indications, food production in 1945 may be about 32 percent above the 1935-39 average, although about 5 percent less than the 1944 record. The principal reduction from 1944 will be in slaughter of meat animals, which will affect both the meat and the fats and oil supply. Food demands in 1944 were met partially through heavy reduction of food stocks, which are now at a low level.

In 1944 about 80 percent of the total quantity of food utilized went to American civilians, 13 percent to the United States military, and the remaining 7 percent to foreign countries and United States territories. This apportionment of the 1944 food supply to American civilians brought average consumption per person up to a level 10 percent above that of 1935-39. On the basis of present indications, American civilians may get 77 percent of the total amount of food for 1945, 16 or 17 percent may be taken by the armed forces for troop feeding and civilian relief abroad, and the other 6 or 7 percent will be sent abroad through lend-lease, relief channels, or usual commercial arrangements.

Supplies of individual foods for United States civilians in 1945 may be, briefly, about as follows:

Meat about 120 to 125 pounds per capita, much below the 1944 record rate of 150 pounds. Most of the drop is due to reduced hog slaughter, which also reduces lard supplies. With butter production down too, the whole fats and oils situation is very tight.

1945 Food Production Forecast <sup>1</sup>

Food group	1945 forecast as a percent of—		
	1935-39 average	1943	1944
Food grains.....	140	121	95
Truck crops.....	137	110	101
Fruits.....	123	114	99
Vegetables <sup>2</sup> .....	105	84	99
Sugar crops.....	92	114	112
Total food crops.....	126	109	98
Meat animals.....	141	94	91
Poultry.....	145	95	95
Dairy products.....	117	104	101
Total food livestock.....	134	97	95
Total food production.....	132	100	96
Civilian food consumption per capita.....	102-104	96-98	93-95
Total agricultural production.....	127	99	93

<sup>1</sup> Forecast based on prospective plantings and preliminary livestock indications.

<sup>2</sup> Excludes truck crops.

with no substantial improvement in sight till next summer.

Civilian egg consumption is establishing new records, and may average about an egg a day for the whole year. But civilian demand will continue to be heavy and because of seasonal decrease in production supplies will be smaller in the second half of the year.

Fresh fruits and vegetables, about the same in total as last year, but more citrus, tomatoes, leafy green and yellow vegetables than prewar. Victory gardens will be particularly important in keeping up our wartime level of these important foods.

Canned fruits and vegetables, and potatoes and sweetpotatoes will be somewhat less than 1944, with actual civilian supplies directly dependent on military takings.

Food grains will be ample to meet increased civilian demand, with the exception of rice, and still fill very large military and export requirements.

Fish supplies in the fresh and frozen state will be in prewar quantities, but there will be little canned fish.

Beverage supplies will be adequate, with perhaps more tea and coffee and a little less cocoa.

The indicated per capita food supplies from both commercial and victory garden production, will provide a level of civilian nutrition generally above the prewar level, but somewhat below 1944. This general improvement is largely due to the 26 percent increase in fluid milk and cream consumption, the enrichment of grain products, and the increased consumption of green and yellow vegetables, tomatoes, and citrus fruits. The reduction in supplies of sugar, meats, fats and oils, compared with 1944, will cut the number of calories 5 to 10 percent, unless people eat more grain products than now seems probable. But American civilians still will average a good safe margin above any recognized standard for the intake of food energy. Supplies of niacin and thiamine will be about 10 percent less than last year, largely because of the cut in pork supplies. Quantities of other nutrients available in 1945 probably will be about equal to those of 1944, but at least 10 percent above the 1935-39 averages.

Food consumption levels in Canada have closely resembled this country's during the war, but food supplies in

Estimated 1944 Civilian Per Capita Supply of Major Foods, Calories Available, and Comparisons with Prewar Consumption, United States, Canada, and Several European Countries

Country	Approximate number calories per person per day		Meats, poultry, fish		Fats and oils, including better		Milk, whole and standard		Sugar and sugar content	
	Number	As per cent of prewar	Dressed weight—pounds	As per cent of prewar	Fat content—pounds	As per cent of prewar	Retail wt milk equiv.—pounds	As per cent of prewar	Refined basis—pounds	As per cent of prewar
U. S. ....	1 3,250	106	194	115	43	96	473	120	98	92
Canada .....	3,320	108	194	127	42	102	533	117	92	88
U. K. ....	2,940	98	136	82	39	85	311	125	74	67
Denmark .....	3,000	94	148	81	37	69	356	92	71	65
Belgium .....	2,100	71	58	43	19	48	126	70	49	78
France .....	2,150	77	75	45	11	31	130	68	27	54
Netherlands .....	2,100	72	61	44	21	44	167	58	42	56
Norway .....	2,200	73	115	68	24	49	304	78	38	52
Finland .....	N. A.	N. A.	50	50	15	50	411	67	19	30
Germany .....	2,500	88	90	69	29	56	160	59	44	92
Austria .....	2,450	88	73	57	25	81	250	56	45	90
Poland .....	N. A.	N. A.	33	69	11	65	180	74	19	100

<sup>1</sup> To be comparable with other countries, U. S. figure is about 150 calories less than the total usually used.

Sources: U. S.—BAE; Canada and U. K.—Combined Food Board; preliminary estimates for other countries—OFAR.

Europe have been entirely different. Food supplies were smaller in most of these countries in 1944 than in 1943, and 1945 food production on the Continent is expected to be even less than this past year. There are great differences in food supplies between areas and for farm and nonfarm people. Nonfarm consumption is perhaps 25 percent below farm levels. The very

serious 1945 food situation for many European countries results from disruption of production and distribution as well as general destruction of transportation facilities, food supplies, and processing facilities—the usual aftermath of war.

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## Commodity Reviews

### LIVESTOCK

**C**ATTLE feeders will receive direct subsidies for fed cattle marketed after May 18, as announced by the War Mobilization Director. Additional programs announced at the same time are designed to increase cattle feeding, to increase margins for processors of meat, to improve meat distribution, and to effect better control of livestock ceiling price regulations.

The Commodity Credit Corporation, through local AAA offices, will pay livestock feeders 50 cents per 100 pounds (liveweight) on AA and A grade cattle sold for slaughter (based on cattle selling for \$14.25 or more per 100 pounds at Chicago) weighing 800 pounds or more which have been owned by the feeder for 30 days or more. There will be no downward revision in the overriding ceilings or the maximums of the stabilization ranges for beef cattle, except bulls, without at least 6 months advance notice.

A new schedule of subsidy payments to cattle slaughterers became effective June 4, representing a 25-cent per 100-pound (liveweight) additional increase for all grades. The special subsidy of 80 cents per 100 pounds for nonprocessing cattle slaughterers was reduced to 40 cents per 100 pounds, liveweight. Slaughter payments on hogs were increased 40 cents, and are now \$1.70 per 100 pounds liveweight. After a more thorough study of slaughter profits,

hog slaughter payments will be adjusted when hog prices decline from ceiling levels.

In an effort to distribute civilian meat supplies more uniformly, new set-asides will be issued so that larger purchases will be made from federally inspected slaughterers whose operations have increased greatly instead of the uniform percentages for all slaughterers of this class.

To encourage increased farrowings this fall—to meet the 37-million pig crop goal—the price support program for hogs has been broadened to include all good and choice barrows and gilts until September 1, 1946. Formerly only butcher hogs of weights up to 300 pounds were included. The \$13 support price, Chicago basis, is unchanged.

### 1944 CASH RECEIPTS

**T**OTAL cash receipts from farm marketings in 1944 were 19.8 billion dollars, according to revised estimates, 2 percent above the revised estimate of 19.3 billion dollars in 1943. Government payments in 1944 amounted to 804 million dollars, 20 percent greater than in 1943. This increase was due mostly to the dairy production program which was put into effect in October, 1943.

The 8 percent increase in receipts from crops was brought about mainly because of large acreage, relatively high yields, and slightly higher prices than in 1943.

# **Cash Receipts From Farm Marketings of Crops and Livestock, 1943 and 1944**

Commodity group	1943	1944	1944 as percent of 1943
	<i>Mill. dol.</i>	<i>Mill. dol.</i>	<i>Percent</i>
Food grains.....	947	1,191	126
Feed grains and hay.....	1,126	1,116	99
Cotton and cottonseed.....	1,318	1,490	113
Oil-bearing crops.....	675	477	71
Tobacco crops.....	540	717	133
Fruit and nuts.....	1,203	1,476	123
Vegetables.....	1,692	1,489	94
Sugar crops.....	107	123	115
Forest products.....	101	110	109
Other crops.....	371	414	112
<b>Total crops.....</b>	<b>7,980</b>	<b>8,604</b>	<b>108</b>
Meat animals.....	5,885	5,705	97
Dairy products.....	2,809	2,989	106
Poultry products.....	2,446	2,295	94
Other livestock.....	239	216	90
<b>Total livestock.....</b>	<b>11,359</b>	<b>11,186</b>	
<b>Total cash receipts.....</b>	<b>19,340</b>	<b>19,790</b>	<b>102</b>
Government pay- ments.....	672	804	120
<b>Cash receipts and Government pay- ments.....</b>	<b>20,012</b>	<b>20,594</b>	<b>103</b>

Cash receipts from meat animals dropped 3 percent as the decline in hog marketings in some of the large producing States of the West North Central region was rather acute. The sale of cattle and calves was slightly greater than in 1943 but production of sheep and lambs dropped.

Cash receipts from dairy products showed a 6 percent gain over 1943 as milk production increased about 812 million pounds, with prices the highest since 1920.

The 1944 cash receipts from all classes of poultry, except turkeys, were below 1943 receipts. Average prices for eggs dropped rather severely resulting in a 6 percent decline in cash receipts despite increased sales. An 11 percent decline in the sale of chickens, other than broilers, combined with a slight drop in price brought about a 13 percent decrease in cash receipts. The quantity of broilers was 6 percent below 1943, with the same percentage decline in cash receipts. In contrast, large turkey marketings

and slightly higher prices resulted in a 23 percent gain in cash receipts over 1943.

## **POULTRY AND EGGS**

**B**ECAUSE of scarce meat supplies and strong civilian demand, the over-all demand for eggs at ceiling prices, despite up grading, has exceeded supply by a wide margin even during the flush production season, an unusual situation. And continuation of this situation is in prospect for most of the remainder of the year. Per capita consumption during the first quarter of 1945 was at a record of about 100-105 eggs, compared with 90 eggs for a year earlier.

Egg production during the first 4 months of 1945 was 7 percent below a year earlier. Average number of layers in the 4 months was about 10 percent below a year earlier, but favorable weather, ample feed supplies and high unit returns brought about an all-time high rate of lay in April.

Poultry meat production is behind last year though increasing seasonally. Shortages of red meat and heavy military demand are largely responsible for recent increases in production. Although broiler production has been well ahead of last year, it has been more than offset by declines in marketings from general flocks.

Because of heavy demand by the military for chicken meat, War Food Order 119, which has virtually prohibited private sales of commercial broilers in several important broiler-producing areas for some time, was recently extended to include 10 counties in North Carolina. Areas now covered by the order produced about 60 percent of the total commercial broiler output last year.

In 1945 civilians are expected to receive about 20 pounds of chicken per capita, compared with the prewar level of about 18 pounds, but 3 pounds below 1944 consumption and 8 pounds below the 1943 record.

With hatchings of turkey poults far

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
1935-39 average...	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	150	106
1943.....	192	162	119
1944.....	195	170	115
1944			
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

ahead of last year, the 1945 turkey crop is likely to be the largest on record, exceeding the record 1944 output by about 10 percent. Despite large military requirements—last year's set-aside order for the military was reinstated effective April 8—the expected record output means civilians will probably get more turkey than last year. Turkey consumption in 1944 was nearly 3½ pounds per person compared with the 1935-39 average of little over 2½ pounds.

## DAIRY PRODUCTS

**F**OR the first 4 months of 1945, milk production totaled 38.3 billion pounds, 1 billion more than the January-April 1944 output, and was at an adjusted seasonal rate of over 121 billion pounds. Although this high level of production may not continue throughout the year, it appears that milk production in 1945 will exceed any previous year on record.

This high level of production has made possible a near-record output of

whole milk products, especially American Cheddar cheese and evaporated milk, and has resulted in the largest available supplies per capita of fluid milk. Fluid milk and cream consumption for 1945 is expected to reach 430 pounds per person compared with 423 pounds for 1944 and the prewar average of 340 pounds.

Prices received by farmers will probably continue nearly the same as last year. Demand for most dairy products will continue to exceed the supplies because of large noncivilian needs and strong consumer purchasing power.

With the record seasonally large milk flow, War Food Administration has relaxed some of the limitations on the utilization of milk so as to fully utilize the production. These relaxations permit increased sales of fluid milk and cream, the use of 10 percent more butterfat in ice cream, and a maximum production of 110 percent of the quotas for cheese manufacture during the second quarter of 1945.

In contrast, large noncivilian requirements have necessitated a set-aside of 70 percent of the June Cheddar cheese production for Government purchase, and 55 and 50 percent of the June and July creamery butter output.

## FARM LABOR

**W**ITH only 10,017,000 persons employed on farms May 1, a new low for that date, the labor supply available for farm work continues to decline.

Farm operators will continue to rely heavily on family labor as they have in the past 3 years. May first saw a 74,000 increase over a year earlier in the number of family workers, and 125,000 decrease in the number of hired workers. This increase in family workers may mean that members of farm families who left to work in war plants are returning to their farms. Although it is too early to say with

any certainty, there is a possibility that some laid-off war workers will be available for farm work, at least temporarily, if reconversion gets under way on any scale in the next few weeks.

Continued demand on the small supply of farm labor will probably push farm wage rates above the record high of April 1, 1945. Wage rates for regular workers are usually set at the beginning of the season and are not likely to show much change. Thus farm-labor income this year may be an all-time high. Seasonal workers' rates will, of course, depend on local conditions at the time of hiring.

## MARKETING AND TRANSPORTATION

THE early summer is likely to witness more serious difficulties in transportation and marketing of farm products than were faced by the Nation's farmers last year. This year's production goals call for ap-

proximately the same, and in some products, larger tonnages than in 1944, but the marketing of this increased output must be accomplished with less manpower and in many cases with a reduction in facilities and equipment.

Trucks and tires have advanced in age and deteriorated further, while civilian allocations of new tires have continued far below actual needs. A tight refrigerator car situation in regions with record-breaking crops of perishables is in immediate prospect. Getting adequate supplies of ice into such regions and obtaining manpower for re-icing are typical minor transportation problems.

In the Southwest, developments point to an early strain on refrigerator cars in handling a record tomato crop in Texas where 10,000 cars will be needed, and increased requirements for California potatoes where 35,000 cars will be needed. Prospects of an abnormally heavy peach crop in Georgia have intensified preparations for refrigerator car needs in that area.

## Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		May 15, 1944	April 15, 1945	May 15, 1945	Parity price May 15, 1945
	August 1909- July 1919	January 1935- December 1939				
Wheat (bu.).....dollars..	0.884	0.837	1.47	1.49	1.49	1.53
Rice (bu.).....do.....	.813	.742	1.77	1.77	1.77	1.41
Corn (bu.).....do.....	.642	.691	1.15	1.07	1.08	1.11
Oats (bu.).....do.....	.399	.340	.799	.710	.689	.690
Hay (ton).....do.....	11.87	8.87	16.10	16.90	16.50	20.50
Cotton (lb.).....cents..	12.4	10.34	19.80	20.20	20.51	21.45
Soybeans (bu.).....dollars..	1.96	.954	1.92	2.13	2.15	1.66
Peanuts (lb.).....cents..	4.8	3.55	7.74	8.24	8.30	8.30
Potatoes (bu.).....dollars..	.697	.717	1.32	1.74	1.77	1.25
Apples (bu.).....do.....	.96	.90	3.19	2.53	2.55	1.66
Oranges on tree, per box.....	1.81	1.11	2.43	2.54	2.84	2.03
Hogs (cwt.).....do.....	7.27	8.38	12.70	14.10	14.10	12.90
Beef Cattle (cwt.).....do.....	5.42	6.56	12.00	12.70	12.90	9.85
Veal Calves (cwt.).....do.....	6.75	7.80	13.20	14.03	13.90	11.70
Lambs (cwt.).....do.....	5.58	7.79	13.40	13.90	13.50	10.20
Butterfat (lb.) <sup>1</sup> .....cents..	21.3	20.1	50.8	50.5	50.2	43.1
Milk, wholesale (cwt. lb.) <sup>1</sup> .....dollars..	1.60	1.61	3.11	3.12	3.08	2.49
Chickens (lb.).....cents..	11.4	14.9	24.4	25.7	26.6	19.7
Eggs (doz).....do.....	21.5	21.7	27.2	33.0	33.7	31.6
Wool (lb.).....do.....	18.3	23.8	42.8	40.4	41.0	31.7

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.



Adequacy of grain elevator space for the big wheat crop is tied in with the problem of car supply. If there are not enough boxcars currently to move the grain out of elevators, space will not be available to adequately handle the new crop. While every effort is being made to supply cars, the outlook is not encouraging.

Rather than improving the textile bag situation, Victory in Europe has intensified the problem. Increased relief feeding means more bags for food shipments. And once on their way these bags are gone, as far as American farmers are concerned. This and other causes add up to a 20 percent boost in agricultural demand for textile bags. But allocations for the material for making these bags are running more than five percent under last year.

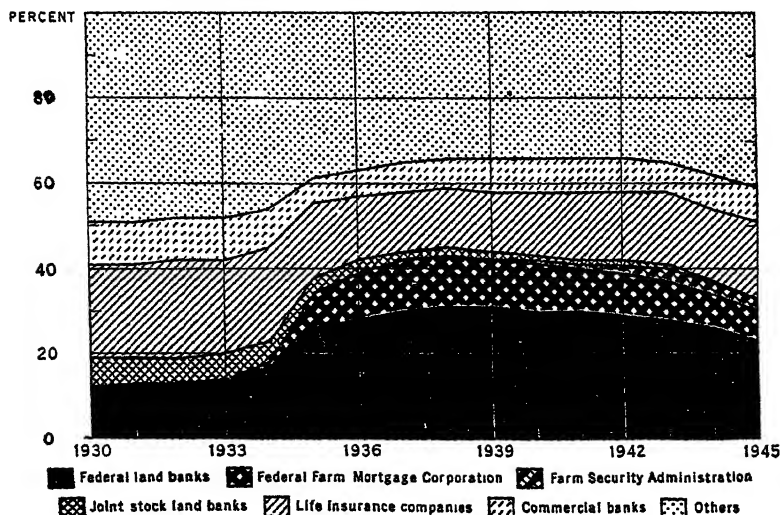
Container requirements are another urgent problem likely to show up first in the Southwest and in peach-producing States such as Georgia, South Carolina, North Carolina, and Arkansas. The situation on lugs and baskets

will be tight, in spite of efforts such as in the Georgia area to stock baskets 60 to 70 days ahead of the usual time. Emphasis will be on used containers, and some extension of the practice of hauling products in bulk is indicated.

Wood supplies for containers are much tighter than a year ago, so that at best, wood containers will not exceed last year's short supply. Shortage of textile materials is at such a stage that re-use will be depended on more than at any time since the start of the war. The fiberboard situation is much worse than a year ago.

Unexpected developments may alter this dark picture of early summer marketing and transportation. Conservation measures organized by the Office of Defense Transportation can be counted on to eliminate much waste mileage from producers to plants of processors and in intra-plant movements. Also there appears to be a growing tendency to recognize potentially troublesome developments in time to make the necessary shifts of limited manpower and equipment.

PERCENTAGE OF FARM-MORTGAGE DEBT HELD BY SELECTED LENDERS, UNITED STATES, JANUARY 1, 1930-45



# How the Farm-Mortgage Debt Is Distributed

**T**OTAL farm-mortgage debt on January 1, 1945 is estimated at  $5\frac{1}{4}$  billion dollars, a decline of one-fifth from the 1940 level. Along with this decline has occurred a major shift in the distribution of the debt among the several lenders. On January 1, 1945, the federally sponsored agencies—Federal land banks, Federal Farm Mortgage Corporation, Farm Security Administration and joint-stock land banks—held about 33 percent of the total debt as compared with over 43 percent, 5 years earlier. Private lenders, on the other hand, held a correspondingly larger proportion of the debt at the beginning of 1945.

Of the decline in total debt of more than 1.3 billion dollars between 1940 and 1945, over 92 percent occurred during the last 3 years. This decline is even more significant when viewed in the light of the increase which occurred during and immediately following World War I. During the 5 years 1915–19, the farm-mortgage debt increased 69 percent as compared with a decrease of 20 percent during the 5 years 1940–44.

## Recent Loan Trends

During the 5 years, 1940–44, the loans held by the federally sponsored agencies were reduced by \$1,112,000,000, or 39 percent, as compared with a decline of \$1,316,000,000, or 20 percent, for the total farm-mortgage debt. Loans held by all these agencies fell off during this period except those held by the Farm Security Administration, which increased from \$38,566,000 to \$178,936,000.

Loans held by the Federal land banks alone decreased nearly 40 percent, and loans held by the Federal Farm Mortgage Corporation declined more than 51 percent. Since the enactment of the Emergency Farm Mortgage Act of 1933 the joint-stock land banks which were not already in

receivership have been in liquidation. Progress in liquidation since January 1, 1940 has been rapid and loans held have fallen from \$91,726,000 on that date to only \$5,455,000 on January 1, 1945.

## 67 Percent with Private Lenders

On January 1, 1945 the remaining lenders held an estimated \$3,529,308,000 or 67 percent, of the total farm-mortgage debt. Life insurance company loans totaled \$933,723,000, insured commercial banks \$449,582,000, and "other" lenders \$2,146,000,000.

In this latter category are individual lenders, mortgage companies, banks other than insured commercial banks, and other miscellaneous lenders. Individual lenders hold the largest proportion of the loans included in the category "other". A special survey conducted for 1940 indicates that individuals held about 70 percent of the debt included as "other." The proportion held by individuals on January 1, 1945 probably was somewhat larger than in 1940, as new loans made by individuals increased at a more rapid rate during the interim than did those made by other private lenders.

The net decline of mortgage loans held by life insurance companies from January 1, 1940 to January 1, 1945 was only a little more than 50 million dollars, or 5 percent. However, in the two years 1940 and 1941 their outstanding loans increased almost 80 million dollars, which was followed by a decline during the next three years of nearly 130 million dollars.

Loans held by insured commercial banks on January 1, 1945 were about 16 percent below those 5 years earlier. These banks, however, have shown a decided strengthening in their mortgage loans portfolio during the last few years. Their farm-mortgage loans increased about a million dollars during 1944. Loans held by "others"

# Total Farm-Mortgage Debt and Amounts Held by Selected Lenders, January 1, 1940-45 <sup>1</sup>

[Million dollars]

Lenders	1940	1941	1942	1943	1944	1945
Federal land banks.....	2,010	1,957	1,881	1,718	1,453	1,210
Federal Farm Mortgage Corporation.....	713	655	635	544	430	347
Farm Security Administration <sup>2</sup> .....	38	73	122	164	177	179
Joint-stock land banks.....	92	74	56	37	10	5
Life insurance companies.....	984	1,016	1,063	1,043	997	934
Insured commercial banks.....	534	543	535	476	448	450
Others.....	2,215	2,186	2,192	2,135	2,130	2,146
Total.....	6,586	6,534	6,484	6,117	5,685	5,271

<sup>1</sup> Excludes territories and possessions. Loans held include regular mortgages, purchase-money mortgages, and sales contracts.

<sup>2</sup> Includes tenant-purchase and farm-enlargement loans, farm-development loans, and construction loans to individuals. Includes also loans made for these purposes from State Rural Rehabilitation Corporation trust funds.

<sup>3</sup> Joint-stock land banks have been in liquidation since May 12, 1933. The data also include banks in receivership.

also increased slightly last year though there was a net drop of about 3 percent during the 1940-44 period.

## Some Factors Influencing Trends

The trend of mortgage holdings of different lender groups reflects both loan liquidations and new loans. Loans of the land banks and the Mortgage Corporation are made on an amortization basis, with the result that substantial principal payments are required each year. These institutions, as well as certain private lenders, have encouraged borrowers to make additional advance payments on principal. As loans made by individuals and other local lenders usually are for relatively short terms, borrowers have had an opportunity to make substantial principal reductions when loans matured. Farmers most indebted, therefore, have had an opportunity to use their wartime incomes to repay debts.

Lending activities of different lender groups are reflected in farm-mortgage recordings. Loans closed by the Federal land banks and the Federal Farm Mortgage Corporation were 14 percent higher during 1944 than in 1943, but the amount was not greatly different from the amounts closed in 1940 and 1941. The volume of loans recorded by individuals was 10 percent larger in 1944 than in 1943 but 71 percent larger than in 1940.

New loans made by institutional lenders frequently result from the sale of farm real estate held by them. Loans of life insurance companies in particular have been sustained during the period 1940-44, as a result of farm real estate disposals. On January 1, 1940 life insurance companies held real estate with a book value totaling nearly \$600,000,000. During the five following years their investment in farm real estate has been reduced on the average of nearly \$100,000,000 a year so that on January 1, 1945 it totaled only \$119,169,000. At the beginning of 1940 the Federal land banks and the Mortgage Corporation did not own as much farm real estate as did life insurance companies, and their investment on January 1, 1945 was relatively insignificant. Real estate disposals probably will not be nearly so significant in the future trend of mortgage debt as they have been in the past few years.

## Postwar Outlook

The downward trend of the farm-mortgage debt during the war has been a wholesome development. The situation on January 1, 1945, was materially better than at the end of World War I and immeasurably better than in 1923 when mortgage debt was at an all-time peak. Many of the loans outstanding at the beginning of World War II, and also many of those

made early in the war period, have been either paid off or substantially reduced. This current mortgage debt situation, however, should not be interpreted to mean that there is no danger of financial distress in the postwar period. A very active real estate market in 1942 through 1944 has resulted in a significant volume of relatively large loans in relation to the probable long-time value of the land and also in relation to the probable income situation in the postwar period. Unless farm income is maintained at a relatively high level after the war, many of these mortgage loans are a potential source of financial difficulties.

A larger-than-normal proportion of the increased farm income of the war period went into debt repayments because alternative uses of income either were restricted or appeared less desirable than debt repayment. The amount of materials for farm improvements and machinery was limited while other available investments yielded lower returns in general than the interest rate which farmers were paying on their mortgages.

Farm income may still be relatively high in the postwar period, but current curbs on such items as building materials and farm machinery will probably not have been renewed. Farmers will be replacing and improving capital assets which have rapidly depreciated during the war. Some farmers will invest only their past savings and

current income in land and capital goods, whereas others will have to go into debt to make such purchases.

Those farmers who will want to buy land or make improvements and buy machinery are not necessarily the same ones who will have sufficient savings or high enough current incomes to finance these capital outlays. Returning war workers and veterans, for example, may be especially in need of land and equipment for farming. Government programs which provide guarantees on limited amounts of credit to veterans may give a stimulus to a large volume of mortgage lending. There is danger that a too liberal credit policy may lead later to an embarrassing financial position for lenders as well as for many farmers.

If farm income remains high for a few years after the war and real estate transfers continue active, those lenders that do not restrict their loans to normal agricultural value may be expected to increase their new loans substantially. Should farm income drop severely in the postwar period, those agencies which base their loan policy on normal values may then increase their loans largely through refinancing of loans held by other lenders. Refinancing operations by Federally sponsored agencies similar to those which occurred during the depression of the early 1920's and the thirties again may become necessary.

The postwar period doubtless will be

#### Acquired Farm Real Estate Held by Selected Lenders, United States, January 1, 1940-45

[Million dollars]

Lending agencies	1940	1941	1942	1943	1944	1945
Federal land banks <sup>1</sup> .....	126	109	74	40	17	7
Federal Farm-Mortgage Corporation <sup>2</sup> .....	40	33	24	20	13	6
Joint-stock land banks <sup>3</sup> .....	47	36	25	18	7	4
Life insurance companies <sup>4</sup> .....	600	548	442	336	205	119
Insured commercial banks <sup>5</sup> .....	42	33	23	<sup>6</sup> 20	( <sup>6</sup> )	( <sup>6</sup> )
Three State credit agencies <sup>7</sup> .....	68	61	53	44	36	( <sup>6</sup> )

<sup>1</sup> Investment, includes sheriff certificates and judgments.

<sup>2</sup> Carrying value, includes sheriff certificates and judgments. Real estate held by banks in receivership included at book value.

<sup>3</sup> Estimated book value.

<sup>4</sup> June 30, 1942.

<sup>5</sup> Book value.

<sup>6</sup> Data not available.

<sup>7</sup> Reported investment by Department of Rural Credit of Minnesota, Bank of North Dakota, and Rural Credit Board of South Dakota.

one of substantial readjustments in agriculture. The extent to which these readjustment problems are successfully met will in no small measure depend both upon the way farmers manage their financial affairs and the type of loan and collection policies followed by lenders. The ability and willingness of lenders to shape their loan and collection policies to meet financial problems of farmers varies consider-

ably. Some private lenders will be in a financial position to take a long-run view of mortgage financing in both their own and their borrowers' best interests. But many of the small private lenders may not have the financial resources necessary to meet depression exigencies even though they might be willing to do so.

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## Sugar Supply Prospects

**S**UGAR supplies available to civilians in the United States will be at least one-fifth smaller during the remainder of 1945 than they were in 1944 or during the first quarter of 1945. Per capita civilian consumption, which averaged 89 pounds in 1944, is expected to be reduced to an annual rate of about 70 pounds for the remainder of 1945, or 72 pounds for the entire year.

The most important factors accounting for the shortage of sugar in the United States in 1945 are (1) the smaller crop produced in Cuba this year, (2) increased needs of the military forces and of liberated areas in Europe, (3) a reduction of one-half million tons in sugar stocks in the United States.

This year's Cuban sugar crop is currently estimated at 4.0 million tons. This compares with a total of 5.6 million tons in 1944, of which the equivalent of 900,000 tons was used for high test molasses for the manufacture of alcohol to use in making rubber and other products. While the United States has purchased the entire 1945 Cuban crop of sugar, except for relatively small quantities needed for local consumption in the island and exports to Latin America, this does not mean that the people of the United States will be able to consume all of the Cuban sugar purchased. Substantial parts, by previous agreement, will be shipped to Canada and the United Kingdom. In prewar

years, these countries normally imported about 640,000 tons of sugar from Cuba as compared with 2 million tons for the United States. While the amount of beet sugar produced in the United States in 1945 is likely to be somewhat larger than that produced in 1944, the increase will not be nearly sufficient to make up the decrease in supplies obtainable from Cuba. Also none of this sugar will be available until late in 1945.

### Three-Fourths Normally Imported

In prewar years the United States obtained about one-fourth of its supply of sugar from the production of sugarcane and beets in continental United States. Slightly more than one-fourth was imported from Cuba. The remainder was almost equally divided between Puerto Rico, Hawaii and the Philippines.

No sugar has been obtained from the Philippines since 1941 and no significant quantity is likely to reach this country before 1947. Before the outbreak of war, Japan was obtaining all the sugar it needed from Taiwan and other areas under its control. Consequently the Japanese were not interested in making much use of the extensive cane sugar acreages in the Philippines. Instead, they encouraged rice and cotton production in large areas which normally produced cane, and also damaged many sugar mills.

Production in Puerto Rico and

Hawaii the past two seasons was slightly below the prewar average. On the other hand, production in Cuba has increased and was especially large in 1944 and this year's crop, though one-third below 1944, is still one-third above the 1935-39 average. The production of beet sugar in continental United States is now down one-fifth below the 1935-39 average, but cane sugar output has increased somewhat. However, the total production of the two has declined because usually the beet crop is so much larger than the cane.

### Europe Usually Imports Little

Europe normally produces a major part of the sugar which its people consume. However, production has been greatly reduced by active fighting, disrupted transportation, lack of coal for operating sugar mills, and dislocated populations. This is true in liberated countries as well as in Germany itself. Part of the reduced production must be made up by shipments of sugar which would otherwise be available to the United States if the liberated areas are to obtain even the minimum amounts necessary to prevent serious suffering. Japanese occupation of Java makes it impossible for Europe to import sugar from that source, as it formerly did when local supplies were inadequate.

American military needs for sugar in 1945, as allocated shortly before VE-day, amount to 1.3 million tons, about 9 percent more than in 1944. It was thought that this increase was needed because of the larger number of men in the services stationed abroad, and the larger number of civilians in recent battle areas who must be fed by the Army and Navy. Despite reductions in the size of the armed forces connected with the European phase of the war, intensified efforts in the Pacific, necessitating more personnel and much longer supply lines, means that reduced sugar requirements in the East will be offset by increased needs in the West. It is expected that the

**Sugar Supply Sources for the United States, 1935-39 average, 1944 and 1945 estimate<sup>1</sup>**

Source of supply	Amount of sugar (raw value)		
	1935-39	1944	1945 estimate
	1,000 tons <sup>1</sup>	1,000 tons	1,000 tons
Domestic beet.....	1,479	1,153	1,160
Continental cane.....	424	538	1,490
Cuba.....	2,068	4,024	2,600
Puerto Rico.....	852	753	830
Hawaii.....	946	824	800
Philippines.....	958	0	0
Other.....	101	131	140
Total.....	6,798	7,461	8,950

<sup>1</sup> The figures include relatively small amounts exported from the United States.

military will use about one-fifth of the total supply of sugar available to the United States in 1945.

### Stocks Down Half Million Tons

Total stocks of sugar in the United States on January 1, 1945 amounted to 1.2 million tons, raw value, as compared with 1.7 million tons a year earlier and 2.1 million tons on January 1, 1943. The stocks on hand at the beginning of this year were the lowest since comparable records became available and close to the minimum necessary at that time of year if continuous distribution throughout the country is to be maintained.

There is little possibility that the supply of sugar available to the United States during the remainder of 1945 can be significantly increased. Special incentive programs to encourage the production of sugar are already in effect in every sugar-producing area of the United States, including island territories. It has been suggested that more than the usual proportion of beet sugar from the 1945 crop be used in the fall months this year. However, if this is done, there will be a corresponding decrease in supplies for 1946, in addition to the extra expense of transporting beet sugar outside of the areas where it is normally consumed.

Beet sugar production in the United States is likely to be larger in 1946 than this year. Inadequate labor sup-

plies have been the most important factor limiting sugar beet production since 1943. Increased mechanization and a somewhat larger supply of labor seems likely by 1946.

### Small World Output for Some Time

It will probably be several years before world sugar production increases to its prewar level. However, some increase in production in 1945-46 is probable. Cuba has now about 2.6 million acres in cane, as compared with an average of 2.2 million acres for 1935-39. The small crop harvested in 1945 is largely the result of a lack of 2-year-old cane to harvest and a drought during the growing season. Yields in 1946 will be higher if normal weather prevails, although very little 2-year-old cane is likely to be available.

Beet sugar production in Western Europe probably will be somewhat larger in 1945 than it was last year and should increase further in 1946, as this area recovers from the effects of war. Assistance from the United States in obtaining needed fertilizer, machinery and other supplies would doubtless add appreciably to the amount of sugar produced. This will indirectly increase the supply of sugar available to the United States.

In prewar years, France produced about 1 million tons of sugar per year. Production in 1944 was only a fraction of this. Many of the sugar beets produced last year could not be processed because of a lack of coal for the sugar factories. A similar situation existed in Belgium. Sugar production in Czechoslovakia, which averaged about 750,000 tons in prewar years, may

easily reach its lowest point in 1945, although reliable information is unavailable. The other European countries producing large amounts of sugar in prewar years were: Russia, 2.6 million tons, Poland, 550,000 tons, and Germany, 2.1 million tons.

The production of sugar in Puerto Rico in 1944 and 1945 has been relatively small because of adverse weather and labor difficulties. Some increase is probable in 1946, but the amount will be small relative to the total needs of the United States.

Production in Hawaii probably cannot be increased very much because of the lack of additional suitable land. Neither is the production of cane sugar in continental United States likely to increase much in the next few years. It has been maintained at a relatively high level during the war and the mills in Louisiana have been operating at close to their maximum capacity.

Relatively little is known at this time of the condition of the sugar industry in the Philippine Islands. In prewar years, the United States obtained nearly a million tons of sugar per year from this source. Assistance from the United States in rehabilitating the industry doubtless would materially increase the amount of sugar which could be obtained from the Islands during the next few years. However, no sugar can be expected from the Philippine Islands in 1945 and probably not in 1946, largely because of the time needed to reestablish cane fields.

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## Farm Machinery in Wartime

FARMERS have greatly expanded their use of farm machinery during the war. Because of top demand for agricultural products at favorable prices, together with rising labor costs, widespread use of many machines has been profitable on farms where this would not have been true

under prewar conditions. Several million farm men in the armed forces and in war industries have necessitated greater use of farm machinery to meet wartime farm labor shortages. And because farm wage rates doubled from 1941 to 1944, farmers have been stimulated to use their machinery more

extensively. Further, greatly increased farm incomes have given farmers the means to generally expand their use of farm machinery.

### **Big War Output**

When United States entered the war, farmers in many areas were well supplied with farm machinery. The years 1939 through 1941 saw a large amount of new farm machinery produced, with the 1941 output the largest in history. As the demand for agricultural products increased beginning in late 1941, there has been a corresponding increased demand for farm machinery which has been far from satisfied. And even though production of new farm machinery has been restricted during the war, the 1942 and 1944 output were above normal prewar levels. Only the 1943 production can be considered below prewar. Yet this high level of production during 5 out of the last 6 years has not been enough to meet the demand.

War restrictions on the quantities of steel and other materials available for producing farm machinery made it necessary to utilize the materials in a way to produce the machines that would be most effective in meeting the tremendous demands for increased food output and at the same time make maximum use of dwindling labor supplies. Tractor production, for example, was planned so that there would be available only a minimum of replacements for obsolete and worn out tractors, and so that there would be sufficient additional tractors to take care of increased crop acreages on the one hand and to compensate for losses in animal power due to declining work stock numbers on the other. Tractors, on farms from 1942 through 1944 increased more than 12 percent, with comparable increases for most tractor tillage equipment.

### **Emphasis on Harvest Machines**

To help meet the labor shortages for harvesting operations, probably the most severe of all farm labor shortages, the various wartime farm machinery

## ***Production Outlook for Farm Machinery***

Production of farm machinery and equipment in prospect for the year beginning on July 1 will be at least 30 percent more than scheduled for the season just ending. But the bulk of the increased supplies are not expected to become available until after this year's harvest.

Manpower and component parts difficulties will be encountered, but large amounts of steel are expected to become available to manufacturers of farm machinery and the Government is helping the plants obtain adequate manpower.

Production quota limitations on farm machinery manufacturers have been removed, and they will continue to receive assistance in obtaining materials including steel. In addition, they are now permitted to obtain, on a competitive basis, steel in excess of allotments.

Manufacturers expect to complete the 1944-45 program in full, though production on May 1 was about 10 percent behind schedule, with some items 25 percent behind. Tractor output, however, was about on schedule. This program calls for new machinery production a little smaller than the record output of 1941.

Editor

production programs gave high quotas to the important labor-saving harvest machines. For many—such as corn pickers, combines, windrow pick-up balers, and tractor mowers—the percentage increase in numbers on farms has been much greater than for tractors. Some machines either in the experimental stage or little used at the



outbreak of war, such as the beet harvester, mechanical cotton picker, field silage harvester, and land clearing machines, have also increased in use during the past few years, but are still of relatively minor importance.

Outstanding during the war has been the shift from hand to machine milking. Milking machines are used more days per year and more hours per year than any other farm machine. The 50 percent increase in milking machines since January 1, 1942 has contributed materially toward meeting labor shortages on many farms.

#### **Machines Increase Labor Output**

Getting more work out of each machine, especially the new-type machines, has been a most important factor in obtaining greater agricultural output during the war. Recent studies show that acres harvested per mechanical corn picker jumped from 100 acres in 1941 to 150 in 1943. And similar increases have taken place in the use of combines, hay balers and many other harvest machines. Farm machines, particularly the labor-saving ones, have had greater annual use during the war because of increased acreages of crops per farm and because of more extensive custom work. Accelerated mechanization has probably been the most important farm labor saver during the war. The depleted farm labor force could not possibly have set the all-time production records without the increased use of machines.

Thus, this greater use of farm machinery during the war has been accompanied by a much greater output per farm worker. The 1944 output per worker was nearly one-half more than the 1935-39 average. And this resulted despite the radical change in the farm working force. Because of the large numbers of skilled farm men drained from the farm labor force into the armed services and war industries, the composition of the working force during the war has been less skilled and has been made up of a much higher proportion than usual of women as well as older workers and

children. Yet total agricultural production in 1944 was well over a third more than the 1935-39 average.

Much of this increased output per worker was made possible through more effective use of farm machinery. Wartime conditions have stimulated improved methods of getting the most done with each farm machine. Training programs have assisted less skilled labor to make better use of the newer types of machines. Moreover, many of the new types have enabled the less-physically capable workers to do many farm jobs that formerly required able bodied men. Increased mechanization has made possible greater flexibility in farm operations, which have paid dividends in more production, and at the same time made possible greater output per worker. For example, steady use of tractors and tractor equipment day and night permitted rapid land preparation and planting operations in late wet springs, which added materially to the record corn crops of 1943 and 1944. Likewise the 50 percent increase in milking machine installations has been one leading factor which has made possible the very large increase in milk production during the war.

#### **Animal to Tractor Power Speeded**

Of equal significance to the decline in skilled farm labor during the war has been the continued decrease in workstock in recent years and a corresponding decrease in animal-drawn and animal-powered machines. Hence the growing dependency on tractor-powered or other mechanical-powered machines. Total decrease in horse and mule numbers in recent years has averaged close to a third of a million head a year and colt production has been steadily declining, with the 419,000-head crop in 1944 probably the smallest in more than a century. There has been little if any change in this trend during the war and it is not likely to change in the years ahead. Thus the need for mechanically powered machines to replace

animal-powered ones will become greater, not less, as time goes on.

But this shift from animal to machine power has its compensation. Since 1920, when the shift became pronounced, over 50 million acres of cropland and large acreages of pasture, once used for growing horse and mule feed, have been made available for the production of food, fiber and oil crops. Because there has been virtually no change since 1920 in the total area of land in harvested crops, summer fallow, pasture and range land, this 50 million additional acres available for food production purposes has considerable significance in the ability of the Nation's agricultural plant to meet the tremendous wartime demands.

#### A Look Ahead

Today farmers have comparatively large cash resources and so purchases of farm machinery seem certain to be at record levels when the machines become available. Total purchases may exceed one billion dollars annually for at least several years. During the next 5 years increases in tractors on farms are expected to average 100,000 or more annually, and more than 2½ million tractors will likely be on farms by January 1, 1950. About 50,000 of these tractors annually will be needed to compensate for losses in numbers of work stock. Annual replacement needs for worn out and obsolete tractors are now estimated at about 100,000 units, but this figure will continue to increase and may approach 200,000 ten years hence. At the present time there are at least 150,000 tractors and many other farm machines, which would have been discarded had new machines been available.

Most urgent in the postwar period will be the need for new transport vehicles, especially automobiles. Replacements for motor vehicles since 1942 have been extremely small, and several years at least will pass before these demands can be adequately met. Purchases of many harvest machines and other machines having relatively high wartime quotas will, in the postwar period, reflect the high wartime production and be relatively of smaller volume than purchases of planting, and tillage machines. With further expansion of farm electrification in prospect, purchases of all kinds of electric appliances and equipment will reach levels much higher than before the war.

Farmers should thoroughly appraise every machinery purchase. New type machines are becoming available and for many of these the period of use has as yet not been sufficient to determine the farm conditions under which they can be used profitably. For every machine there are minimum standards of annual use which must be met if the machine is to be used profitably.

Many with small acreage will often find it more profitable to hire than own machines. Custom rates can be expected to decline as more machines become available, especially if labor supplies become more adequate and prices recede from wartime levels. Farmers during the war years have learned to keep their old machines in use. Adequate care lengthens the life of machines and on many farms this type of saving can often contribute toward purchases of equipment needed for improving farm living conditions.

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## Should the Northeast Raise More Grain?

THE Northeast is the leading feed-deficit region of the United States. Over the years farmers in the Northeast have increased their production of livestock and poultry to a much

higher level than can be fed with the home-grown supply of feed grains and other concentrates. Being close to markets, they find they can usually make higher incomes by adjusting

their livestock numbers to the capacity of their farms in respect to forage production, barn space and labor supply. Ordinarily, the level of livestock production is higher than can be supported on the quantities of grains and other concentrates produced on the farm. And so the deficit has been made up by buying feed shipped from other parts of the country.

**Feed Concentrate Consumption for Year Beginning October 1, 1942, Northeast Region, by Areas.**

(Million tons)

Area	Concentrates consumed by livestock	Locally grown grains and feeds	Inshipments of feed concentrates <sup>1</sup>
New England.....	2.30	0.14	2.16
New York, New Jersey and Pennsylvania....	7.98	3.08	4.92
Delaware and Maryland.	1.58	.66	.92
Total.		3.86	8.00

<sup>1</sup> Includes a small quantity of commercial by-products processed from local materials.

In recent years interest in producing more grain in the Northeast has been even greater than usual—probably because of threatened or actual national grain shortages, and because new developments, such as hybrid corn and mechanical corn pickers have made the production of grain more efficient. The advance in technology on farms probably has increased rather than decreased the advantage of the Corn Belt over the Northeast in the production of grain. Even so, the question of more feed grain production in the Northeast is frequently asked and should be considered in planning adjustments in farming for the postwar period.

### Not a Simple Problem

In Northeastern dairy farming, the problem of home-grown grain is closely related to others, particularly that of forage improvement, and becomes a part of the larger problem of how to provide feed nutrients for dairy cattle most efficiently. It is also related to the problems of providing bedding for

cattle and nurse crops for seedings or hay crops. The acreage of small grain in the region probably would be much smaller than now except for these two requirements. Moreover, although improved methods of growing forage crops give satisfactory yields of these crops in fairly long rotations, the rotations on many dairy farms still are too long to get good yields of high-quality forage. If rotations were shortened, the need for corn and small grains in the rotation might even be increased. But for this purpose corn could be grown for either silage or grain, while the small grains could be grown for either hay, pasture, or grain.

From a long-time point of view, a forage improvement program in the Northeast offers great possibilities for reducing the concentrates requirements of dairy herds. Better quality and more amply hay, silage, and pasture could mean more cows that would be better fed and more productive, the feeding of less concentrates per pound of milk, and a lower cost of milk production. But forage improvement is a long-time program and, although considerable progress could be made in a few years, it is unlikely that sufficient progress will be made in the next 5 years to materially change the average concentrate requirements of dairy cows in the Northeast. Thus in looking ahead to the next few years it seems pertinent to analyze the problem of home-grown versus purchased grain on the basis of present feeding practices.

### Typical Dairy Farm

An appraisal of the alternatives to the present situation in terms of the major changes involved in farm organization, costs and returns can be made by considering what would happen on a typical dairy farm, assuming a goal of producing 80 percent of the total feed-concentrates requirements for the dairy herd. Either a higher or a lower percentage could be used without changing the analysis or the general conclusions.

A fairly well organized 30-cow dairy

**Present and Proposed Organization of a  
Typical Northeast Dairy Farm for  
80 Percent Home-Grown Con-  
centrate Production**

Item	Unit	Present organ- ization	Reor- ganiza- tion
Cows.....	No....	30	22
Heifers.....	No....	15	11
Milk sales.....	Cwt....	1,800	1,320
Concentrates for cows.....	Tons....	30	22
Concentrates for heifers.....	Tons....	4	3
Total concentrates for dairy herd.....	Tons....	34	25
Home-grown grain.....	Tons....	10	20
Home-grown grain.....	Acres....	15	30
Purchased concentrates.....	Tons....	24	5
Hay.....	Tons....	90	68
Hay.....	Acres....	60	45
Productive man work units.....	No....	615	612
Regular workers.....	No....	2	2

farm is used for the analysis. Because this farm is representative, the method of analysis would be the same for other farms. Of course, the results would vary, depending on the size of the herd, cropping system, crop yields, and various other factors, but the conclusions regarding the advantage or disadvantage of the proposed changes in farm organization would be in the same direction.

The pertinent phases of the organization of the chosen dairy farm as it is today and as it might be after the changes in organization had been made to provide for the production of 80 percent of the concentrates needed for feeding the dairy herd are shown in table 2. The 30 cows and 15 heifers now on the farm are fed 34 tons of concentrates annually of which 10 tons or about 30 percent are bought. The 20 tons of home-grown concentrates are produced on 15 acres. The herd is also fed 90 tons of hay which is produced on 60 acres of the farm. The yearly production of the 30 cows is 180,000 pounds of milk.

At average yields of crops in the Northeast in recent years, a ton of grain can be obtained from approximately 1 acre of corn or 2 acres of oats, or 1½ acres of barley or wheat. On most farms a combination of corn and small grains would be used; hence

about 1½ acres would be used to produce a ton of grain.

For reasons already mentioned, any increases in the total acreage of grain on most Northeast farms can be accomplished only through corresponding decreases in the acreage of forage crops, which in turn would require proportional decreases in the number of livestock kept on the farm.

Thus a reorganization of this farm to achieve the goal of producing 80 percent of the concentrates to be fed the dairy herd on the farm would involve a reduction in the number of cows from 30 to 22 and of heifers from 15 to 11, because 15 acres now in hay would need to be shifted to the production of grain crops. And total production of milk would be reduced proportionately or from 180,000 pounds to 132,000 pounds. The work load would be reduced approximately 17 percent by the reorgani-

**Estimated Changes in Annual Receipts  
and Expenses on the Typical North-  
east Dairy Farm When Reorganized**

	Quantity	Value at—	
		1935- 36 prices	1944 prices
<b>CHANGES IN CASH RE- CEIPTS:</b>			
Decrease in milk sales....	480 cwt..	\$1,056	\$2,040
<b>CHANGES IN CASH EX- PENSES</b>			
<b>Increases:</b>			
Seed for grain crops.....	15 acres..	40	60
Tractor fuel and repairs....	15 acres..	40	55
Fertilizer for grain crops....	15 acres..	45	55
Harvesting grain crops.....	15 acres..	60	90
Total increase.....		185	260
<b>Decreases:</b>			
Feed concentrates bought.....	19 tons..	720	1,240
Bedding for dairy herd.....	7 tons....	50	75
Miscellaneous dairy ex- penses.....		80	100
Seeding hay crop.....	3 acres..	30	45
Harvesting hay crop.....	15 acres..	30	80
Total decrease.....		910	1,510
Net decrease in cash expenses.....		725	1,250
<b>Decrease in net cash in- come.....</b>		<b>531</b>	<b>790</b>
Decrease in interest on investment @ 5%.....		40	80
Decrease in labor income.....		291	710

zation of the farm, but it still would be a "2-man farm," and no saving would be made in the overhead charges for labor.

### Net Income Less

The estimated changes in the annual receipts and expenses that would result from the changes in the organization of the farm are shown in Table 3. They are computed on the basis of prices for the 1935-39 average and for 1944. The major changes are in the receipts from the sale of milk and in expenses for purchased concentrates. But the decreases in milk sales are significantly more than the decreases in the expenses for feed. Changes in other items of expenses are minor and they tend to offset each other. A balance of net changes in receipts against net changes in expenses shows a net decrease in cash income of \$331 at 1935-39 prices and \$790 at 1944 prices.

In applying this example generally to the immediate future, the adjustments to produce more grain would result in smaller net farm incomes on most dairy farms in the Northeast if any reduction in the number of cows or in the acreage of cash crops were involved. Exceptions might be found on farms well adapted to growing grain but poorly adapted to producing hay and pasture, and on farms now very inefficiently organized. Most farmers who operate farms in the latter group, however, would find better opportunities for raising their incomes through increased forage production and cows

numbers than by growing more grain. On the other hand, the loss in income from shifting toward the production of more grain is likely to be larger on two groups of farms in the Northeast—those having relatively favorable milk prices because they are close to market, and those now producing very little grain—than is indicated in table 3 (which shows a general picture for the region).

Thus on most farms in the Northeast, there seems to be no economic justification for planning to reduce the number of cows in order to be able to produce more grain so long as the national supply of grain remains ample and milk-feed price relationships are approximately normal. In fact, as progress is made during the next few years in the adoption and wider use of forage improvement practices, improved methods of harvesting and curing hay, and more labor-saving methods of doing chores, the best adjustments will be in the direction of more cows per farm, more cows per man, and buying a larger proportion of the feed concentrates fed the dairy herd.

In the more distant future, considerably higher yields per acre of both grain and forage crops may be expected, and the feed for a cow can then be produced on fewer acres. Developments of this kind and extent would of course create broader problems and afford greater opportunities of adjustment than those considered here.

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## Trends in Peach Production and Utilization

PEACHES have been grown in North America since early colonial times. Although not so hardy as apples and not adapted to the country's semi-tropical areas, peaches will grow under as varied conditions as any other tree fruit. They are produced

in every State in the country, although of practically no importance in several northern States. Commercial production was started early in the 19th century in the mid-Atlantic coast States. It has since kept pace with the commercial development of the

Nation as the growth of cities furnished wider markets and the building of railroads and highways and developments of refrigeration provided the means of transporting the fruit to consuming centers.

Growing of peaches, like most other fruits, has tended to shift to larger commercial orchards and to the more favorable soils and locations. In the past 35 years, the general level of United States peach production has increased from an average of a little more than 40 million bushels to more than 60 million, with California cling stone varieties accounting for approximately 13 million bushels of the increase. In the same period, the number of peach growers has declined from nearly 2 million to a little over a million. Most of the long time production increase was in the irrigated sections of the West, while the sharp decline in number of growers has been in the East.

#### Steady Increase in Production

Production has moved upward during the past few years in most commercial peach areas, with the total crop averaging about a fifth larger in the 1939-44 period than in the previous 6 years. Growers have generally followed better cultural practices, including increased applications of fertilizer and more nearly adequate spraying, pruning, cultivation and irrigation, which have been profitable with the higher wartime prices. Also, increased plantings of the late 1930's are now coming into bearing in significant numbers in South Carolina, California, and some other areas.

While peach production has increased steadily over the years, the value has fluctuated with the prices received. The large 1944 crop brought farmers a record return of 154 million dollars, and the short 1943 crop brought the next largest return of 101 million dollars. In contrast, the largest crop on record in 1931 brought only 37 million dollars, followed by a small

crop with the lowest value since 1909, only 17 million dollars.

Between 1909 and 1930, season average prices received by farmers ranged mostly between one and two dollars per bushel. Then in 1931 and 1932 the price dropped to a low of 60 cents and generally remained under a dollar until 1942. By 1943 the price reached a high of \$2.60 and last year averaged \$2.29 per bushel.

#### Half Sold Fresh

Since 1934 peaches sold fresh have averaged about a half of the total crop, while those sold to canners averaged about one-fourth of production, dried about one-tenth, those used in farm households about one-tenth, and other uses and not utilized about 5 percent.

In California where about two-fifths of the Nation's peaches were grown during the past 10 years, fresh sales averaged only about one-sixth of production. On the other hand, about four-fifths of the production outside of California went to the fresh markets. Fresh peaches are available in volume during June, July, August, and September, with small quantities in May and October. The 10 early Southern States—which have averaged about a fourth of the total crop since 1934—furnish the bulk of the peaches which go to eastern fresh markets in June and July. California marketings are usually in volume from mid-July to mid-September. Marketings from the other western States move principally in August and September. From eastern producing areas, August peaches originate in an area extending westward from Virginia and New Jersey to Missouri, and September peaches are mainly supplied by New York, Pennsylvania, Ohio, and Michigan.

Peaches are the most important canned fruit, and have been from the time canning was first of any commercial importance. Most of the commercially canned peaches of the country have been California clingstone varieties. Each year since 1934,

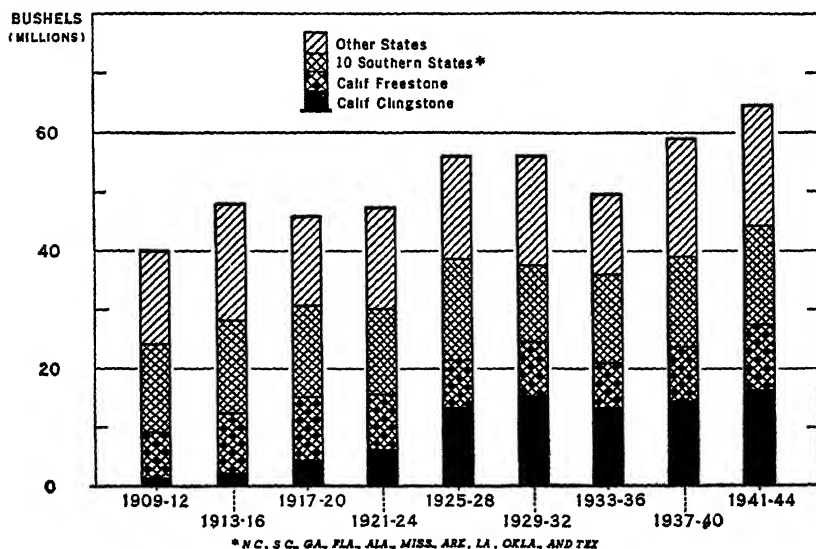
from 88 to 97 percent of all peaches utilized for canning were put up in California. Peaches canned in California increased from less than 2 million bushels used at the beginning of the present century to more than 14 million bushels in 1926. There was a sharp slump in canning during the depression years, reaching a low point in 1932, when less than 6 million bushels were canned in California, and about one-third of the crop in the State was not harvested. After the depression, canning again increased, and in 1944 over 17 million bushels were packed. In recent years canning has become of commercial importance in Washington and Michigan as the level of production has moved upward in these States.

Yellow clingstones have been the most popular peaches for canning and have increased in favor since canning first became important. From clingstones is obtained a canned fruit that is firm, uniformly yellow in color, with a clear syrup. Around 1909, clingstone varieties comprised about three-fifths

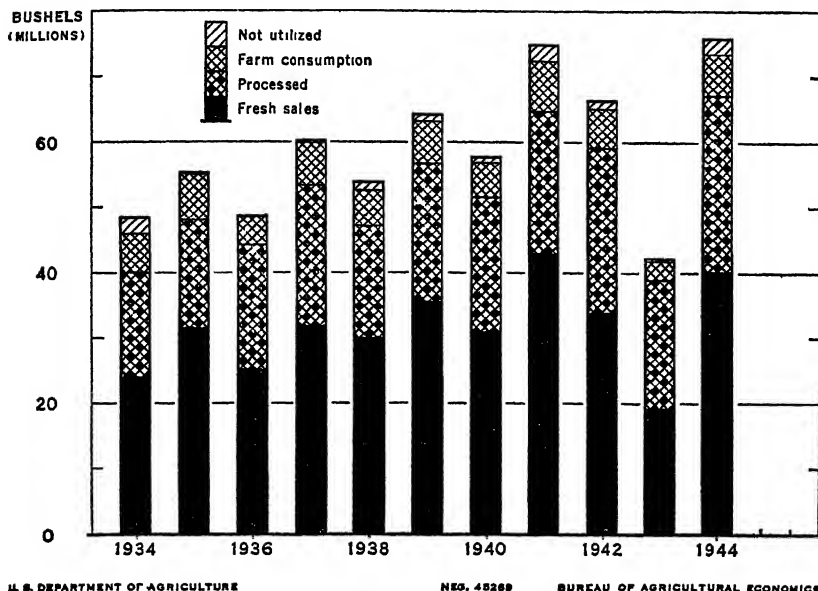
of the canned pack, but the proportion of clingstones increased rapidly and since 1925 has made up more than nine-tenths of the total in most years. California clingstones were grown almost exclusively for canning until around 1930. Since that time important quantities have been dried.

Practically all commercially dried peaches have been produced in California from the time drying was first started in this country. This is because the climate in the California fruit-growing sections is the most favorable in the United States for both fruit production and fruit drying combined, and is one of the most favorable in the world. Most of the rainfall occurs in the winter, while the summers are hot and dry. During the past 40 years, the annual average quantity used for drying has remained at a level of a little more than 6 million bushels. Prior to the "thirties" practically all of the dried peaches were freestones. During the past 10 years, however, clingstones dried have averaged about 1 million bushels,

PEACH PRODUCTION, UNITED STATES, 4-YEAR AVERAGES, 1909-44



## PEACH UTILIZATION, UNITED STATES, BY CROP YEARS, 1934-44



comprising in some years more than one-fourth of total peaches dried.

For many years some fruits have been preserved by freezing, the most important of which has been cold-packed sour cherries. Although peaches are a choice product in the "quick frozen" form, there were practically no peaches frozen prior to 1935 and no important quantities until the last 5 years, following the satisfactory commercial development of the "quick freeze" process. Prior to 1944 the quantity of peaches used for freezing was less than 1 percent of production. In 1944 almost 2 percent of the production was frozen. Within the next few years, the freezing of peaches will no doubt increase considerably and possibly soon may amount to an important part of the peach crop. At present, California is the most important State in the freezing of peaches and will probably continue to be, owing to the importance of the peach production in the State and long distances to markets.

Peaches are one of the most perishable fruits in the fresh form and must be utilized soon after ripening. When large-sized crops have been produced, considerable quantities have necessarily been wasted because canning-plant capacity is not sufficient to handle unusual surpluses, particularly in the East. Freezing may help solve the problem of utilizing surplus peaches, at least the better grades of fruit.

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14 = 100				Index of prices received by farmers (August 1909-July 1914 = 100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	88	80	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	106	161	160	148	148	154	163	158
1920-24 average.....	76	122	160	161	173	179	159	163	123	142
1925-29 average.....	86	129	143	155	168	179	160	165	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	98
1935-39 average.....	100	100	116	125	128	118	119	109	119	117
1941.....	163	169	137	131	132	154	139	121	146	140
1942.....	199	241	144	152	160	201	182	151	188	178
1943.....	239	318	151	167	162	264	198	190	200	200
1944.....	234	326	182	178	170	315	198	174	200	194
1944-May.....	237	337	182	175	169	-----	194	188	201	190
1944-June.....	236	337	182	178	170	-----	192	184	200	189
1944-July.....	231	330	182	178	170	328	194	185	197	190
1944-August.....	239	334	182	176	170	-----	196	171	201	194
1944-September.....	231	330	182	178	170	-----	198	179	200	196
1944-October.....	232	330	182	176	170	325	201	190	201	198
1944-November.....	239	318	182	177	171	-----	208	207	200	202
1944-December.....	232	323	188	178	171	-----	208	211	198	202
1945-January.....	234	322	183	179	172	324	202	199	203	202
1945-February.....	236	321	184	179	172	-----	200	183	200	201
1945-March.....	235	319	184	180	173	-----	188	175	211	200
1945-April.....	281	-----	184	180	173	335	194	176	215	201
1945-May.....	-----	-----	-----	180	173	-----	192	179	217	202

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1910-14 average-----	100	101	102	96	98	99	-----	99	100	100
1915-19 average-----	193	164	137	168	187	125	-----	163	162	106
1920-24 average-----	147	120	192	189	149	148	* 143	160	151	86
1925-29 average-----	140	119	172	145	129	141	140	143	149	89
1930-34 average-----	70	76	119	74	72	94	106	86	90	66
1935-39 average-----	94	95	175	83	106	83	102	97	107	84
1941-----	97	89	159	107	130	65	129	106	124	94
1942-----	120	111	252	149	172	114	163	142	159	106
1943-----	148	147	325	160	190	179	245	188	192	119
1944-----	165	166	354	164	209	215	212	194	195	115
1944-May-----	170	173	350	160	208	232	225	198	194	115
1944-June-----	165	170	350	163	210	228	231	197	193	114
1944-July-----	161	168	350	164	209	230	195	194	192	113
1944-August-----	156	166	355	162	209	214	186	191	193	114
1944-September-----	155	162	358	170	207	206	166	188	192	113
1944-October-----	164	161	367	171	211	205	153	187	194	114
1944-November-----	185	187	368	168	215	195	188	189	196	115
1944-December-----	167	160	364	168	215	206	228	196	200	117
1945-January-----	169	163	365	163	214	205	262	200	201	117
1945-February-----	169	164	360	161	215	211	223	197	199	116
1945-March-----	171	166	359	163	215	211	203	196	198	114
1945-April-----	172	162	362	163	215	221	269	204	208	117
1945-May-----	172	161	363	165	216	227	193	198	200	116

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes. \* 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION

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**S**MALLER MEAT and poultry purchases by the military beginning July 1 are not expected to ease civilian shortages a great deal, but if these takings were not reduced civilian supplies would become much tighter. The prospective 87 million-head pig crop for 1945, a trifle above last year, indicates larger meat supplies—but not until next spring—because the spring crop was below last year while the fall crop is expected to be 12 percent larger. \* \* \* With civilian consumption of food fats and oils in 1945 forecast at about 10 percent below 1944, civilians now face the most critical fats and oils shortage of the war, because of declining supplies and continued large war requirements. And the situation will not improve till well into 1946. \* \* \* July 1 prospects point to the third largest total crop production in history, exceeded only by the bumper output of 1942 and 1944. A record wheat crop of 1.1 billion bushels and near-record oats crop of 1.4 billion bushels are in prospect, but only a 2.7 billion bushel corn crop, well below the last three years, is now indicated. Total fruit production is expected to nearly equal the record 1944 outturn, with record peach-citrus crops but an extremely short apple crop probable. \* \* \* Farm employment at a record mid-summer low brought wage rates to a new high, approaching an average of \$100 a month without board.

# Commodity Reviews

## WHEAT

**T**HE 1,129-million bushel wheat crop indicated on June 1 would be the largest in history, if realized, and considerably above last year's crop of 1,079 million bushels. Such a crop would be the third one of over a billion bushels, the first in 1915 being 1,008 million bushels.

The large prospective demand for wheat is expected to exceed this big output, thus reducing the July 1, 1946 carry-overs somewhat below the 300-325 million bushel level estimated for July 1, 1945.

Contrary to the usual seasonal decline during the harvest period, wheat prices at terminal markets this year are expected to fall only moderately below ceiling levels. This is because prices are being supported by large purchases for European relief and for exports, as well as by above average

domestic use for food, feed, and industrial alcohol. However, prices may decline more at local markets because of insufficient cars to move the large prospective crop. While the car shortage has eased considerably, the number of cars are not expected to be adequate to expedite movement at harvest time. But it must be remembered that bumper crops have created storage and transportation problems temporarily even in peacetime.

A suggested national goal of 67 to 70 million acres of wheat for harvest in 1946 has been submitted to the States for study, with the announcement of the final goal expected in July. The suggested goal compares with the 1945 goal of 67.7 million acres, the 68.6 million acres actually planted in the fall of 1944 and spring of 1945, and the 1937-41 average of 69.3 million acres.

## LIVESTOCK

**T**HE 52 million spring pig crop plus the prospects of 35 million head this fall, as indicated by farmers in their June 1 intentions, making a total of 87 million pigs for 1945, is a trifle above the 86½ million saved in 1944 but 35 million head below the record crop of 1943.

While the spring crop is 7 percent below last year's it is 12 percent greater than the 1933-42 average. On June 1 farmers intended to breed 5½ million sows for farrowing this fall, 12 percent more than in the fall of 1944. If these intentions are carried out and an average number of pigs are saved per litter, the 1945 fall crop would be about 35 million head, a fifth more than the 1933-42 average.

About 25½ million head of hogs over 6 months old were on farms June 1, 26 percent below a year earlier, indicating a continuation of hog slaughter well under a year earlier.

Despite the smaller 1945 spring pig crop, total meat production this fall and winter will be about the same as a

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio <sup>1</sup>
1935-39 average....	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	180	106
1943.....	192	162	119
1944.....	195	170	115
1944			
June.....	183	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116
June.....	206	173	119

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest and taxes.

year earlier because there will be heavier hogs to offset the smaller number slaughtered and cattle slaughter will continue large. But the larger fall pig crop means more pork next spring and summer, and total meat production will be up at that time if cattle slaughter continues at present levels.

## DAIRY PRODUCTS

**R**ECORD milk production is in prospect for 1945 if average or better than average weather prevails. Because of higher dairy production payment rates unit returns will continue at a record level. The dairy products feed-price relationship is expected to be very favorable for dairy enterprises, hence, production will probably be over 121 billion pounds. But if there is serious deterioration of pasture conditions, production may drop to 120 billion pounds.

With milk production at record levels the output of manufactured products, except butter, are at or near

a record high. Evaporated milk production thus far during 1945 has been at an annual rate of 39 hundred million pounds. Cheddar cheese is ahead of last year, and except for 1942 it has been running ahead of every year. Creamery butter production continues to lag behind last year but the rate of reduction has become narrower. Thus far, it appears that creamery butter production for the last half of 1945 may equal or exceed 1944 output.

## POULTRY AND EGGS

**T**HE 656 million chicks and young chickens on farms July 1 was 11 percent above last year. Based on past relationships, this would mean that the number of hens and pullets on farms January 1, 1946, will be slightly higher than on the first of this year. Hence, egg production during 1946 will be at least as large as this year. Prices received by farmers during the latter part of 1946 may not be as high as those in prospect for the last half of 1945, especially if there is improvement in the supplies

### Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		June 15, 1944	May 15, 1945	June 15, 1945	Parity price June 15, 1945
	August 1900- July 1914	January 1935- December 1939				
Wheat (bu.).....dollars..	0.884	0.837	1.43	1.49	1.50	1.53
Rice (bu.).....do.....	.513	.742	<sup>1</sup> 1.74	1.77	1.76	1.41
Corn (bu.).....do.....	.642	.601	1.15	1.08	1.11	1.11
Oats (bu.).....do.....	.399	.340	.753	.689	.674	.690
Hay (ton).....do.....	11.87	8.87	15.00	16.50	15.90	20.30
Cotton (lb.).....cents...	12.4	10.34	20.16	20.51	20.90	21.45
Soybeans (bu.).....dollars..	<sup>2</sup> .96	<sup>2</sup> .954	1.93	2.15	2.17	<sup>3</sup> 1.66
Peanuts (lb.).....cents...	4.8	3.55	7.84	8.30	8.23	8.30
Potatoes (bu.).....dollars..	.087	7.17	1.26	1.77	1.50	1.25
Apples (bu.).....do.....	.96	.90	3.14	2.55	2.71	1.69
Oranges on tree, per box	<sup>4</sup> 1.31	1.11	2.45	2.84	2.96	<sup>5</sup> 2.08
Hogs (cwt.).....do.....	7.27	8.33	12.60	14.10	14.10	12.60
Beef cattle (cwt.).....do.....	5.42	6.56	<sup>1</sup> 11.70	12.90	12.90	9.38
Veal calves (cwt.).....do.....	6.75	7.80	<sup>1</sup> 13.10	13.90	13.80	11.70
Lambs (cwt.).....do.....	5.88	7.79	<sup>1</sup> 13.10	13.50	13.40	10.20
Butterfat (lb.) <sup>6</sup> .....cents...	23.3	29.1	50.2	50.2	50.2	<sup>6</sup> 41.7
Milk, wholesale (cwt. lb.) <sup>6</sup> .....dollars..	1.60	1.81	<sup>3</sup> 3.08	3.08	3.04	<sup>6</sup> 2.47
Chickens (lb.).....cents...	11.4	14.9	23.8	26.6	27.5	19.7
Eggs (doz.).....do.....	21.5	21.7	28.1	33.7	35.8	<sup>6</sup> 32.0
Wool (lb.).....do.....	18.3	23.8	<sup>1</sup> 42.6	41.0	41.7	31.7

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

of red meat and some decreases in consumer purchasing power.

Demand for chickens and turkeys for the remainder of 1945 will be strong and prices received by farmers will average higher than in 1944. Turkey production will probably be at a record level, at least 10 percent above the 547 million pounds (dressed weight) produced in 1944. Commercial broiler output will be materially above 1944 but the decreases in slaughter of farm chickens will probably offset this so that total chicken meat output may be slightly smaller in 1945 than in 1944.

Although the 441 million dozen eggs produced in June were 3 percent below last year, the rate of lay per average layer for the first 6 months of 1945 has been at a record high. 89.0 eggs against 86.7 eggs in 1944. This high rate of lay is the result of many factors among which are the improvement in types of layers under the National Poultry Improvement Plan, better feed, and improved management practices. And this year the weather may have had some effect.

## VEGETABLES

UNSEASONABLY cold, wet weather in May and early June retarded development of crops in most areas, and an extended period of dry weather reduced crop prospects in the extreme southeastern United States, particularly in Florida. Nevertheless, the aggregate supply of commercially produced truck crops for the fresh market during the summer is expected to be about 4 percent higher than in 1944.

Compared with last year, commercial supplies for this summer are expected to be most abundant for cabbage, cantaloups, honeydew melons and spinach, but considerably smaller for snap beans, cucumbers, eggplant, onions and tomatoes.

If intentions early this season are carried out, it is expected that production of 11 important truck crops for processing will be available this year

from an aggregate acreage about 5 percent larger than the acreage planted for this purpose last year, the record high up to that time.

A record-breaking crop of commercial early Irish potatoes is in prospect for this year. These early commercial potatoes furnish the bulk of fresh market supplies during the summer and early fall, and usually constitute about 14 percent of total annual production of all potatoes.

## FRUIT

TOTAL 1945 production of deciduous fruits, excluding apples, is now expected to be as large as the above-average output of 1944. Commercial apple production may be smaller than the short crop in 1943—very short in the East but nearly average in the West. Growing conditions continue favorable for the new 1945-46 crop of citrus fruit, except in Florida, where rainfall was short last winter and spring.

Among the deciduous fruits with summer harvest peaks, the indicated production this year compared with last is substantially larger for California prunes for drying, slightly larger for sweet cherries and peaches, about the same for pears, considerably smaller for California fresh plums, and substantially smaller for sour cherries and apricots. The California grape crop—table, wine, and raisin varieties—may be about as large as the above-average crop in 1944. Despite the prospects for a large national production of most deciduous fruits, the production in parts of the Northeast and Midwest will be short because of unfavorable spring weather.

The 1945 commercial packs of most canned fruits and fruit juices are expected to be about as large as in 1944, but the dried and frozen fruit packs may be slightly smaller. This year's prospective canned packs of apricots and sour cherries will be substantially smaller than last year because of smaller crops of these two fruits.

# Economic Trends Affecting Agriculture

Year and month	Industrial production (1937-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	58	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	106	151	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	173	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	192	234	189	150	148	212	162	146	171	164
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	198	174	200	194
1944-June.....	235	327	152	176	170	-----	192	154	200	189
July.....	231	320	152	176	170	328	194	165	197	190
August.....	232	324	152	176	170	-----	196	171	201	194
September.....	231	320	152	176	170	-----	198	179	200	196
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	318	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	234	322	153	179	172	324	202	199	203	202
February.....	236	320	154	179	172	-----	200	183	209	201
March.....	235	318	154	180	173	-----	198	175	211	200
April.....	231	310	154	180	173	335	194	176	215	201
May.....	227	-----	155	180	173	-----	192	179	217	202
June.....	-----	-----	-----	180	173	340	191	189	216	203

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>5</sup>
	Crops							All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops	
1910-14 average.....	100	101	102	98	98	99	-----	99	100
1915-19 average.....	193	164	187	168	187	125	-----	168	162
1920-24 average.....	147	126	192	189	149	148	143	160	151
1925-29 average.....	140	119	172	145	129	141	140	143	149
1930-34 average.....	70	78	119	74	72	94	108	86	90
1935-39 average.....	94	95	175	83	108	83	102	97	107
1940-44 average.....	123	119	245	131	159	133	172	143	154
1941.....	97	80	150	107	130	85	120	106	124
1942.....	120	111	252	149	172	114	163	142	159
1943.....	148	147	325	160	190	179	245	183	192
1944.....	165	166	354	164	209	215	212	194	195
1944-June.....	165	170	350	163	210	228	231	197	193
July.....	161	168	350	164	209	230	195	194	192
August.....	156	166	355	162	209	214	186	191	193
September.....	155	162	358	170	207	206	166	188	192
October.....	164	161	317	171	211	205	153	187	194
November.....	165	157	368	163	215	195	188	189	195
December.....	167	160	364	168	215	206	228	198	200
1945-January.....	169	163	365	163	214	205	262	200	201
February.....	169	164	360	161	215	211	223	197	199
March.....	171	166	359	163	215	211	208	196	198
April.....	172	162	362	163	215	221	259	204	208
May.....	172	161	363	165	216	227	193	198	200
June.....	173	162	364	166	217	237	269	210	206

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes. <sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# Fats and Oils Shortage is Critical

**C**IVILIANS are facing the most critical fats and oils shortage of the war. Consumption of food fats as a whole in 1945 will be about 10 percent less than in 1944, and about 15 percent below prewar levels. The most severe shortage is in butter. Per capita consumption of butter in 1945 will be slightly over 10 pounds compared with an average of 16.7 pounds in 1935-39. A reduction of about 300 million pounds in civilian consumption of lard from the 1944 level is in prospect this year. The supply of edible oils available for making shortening, margarine, and other edible products for civilians likewise is short this year.

Supplies of industrial fat-and-oil products, such as soap, paint, linoleum, also are reduced sharply. Output of civilian soap this year will be about 15 percent below 1944, with a notable reduction in chips and flakes. Civilian consumption of paint oils in 1945 will be about 25 percent less than in 1944. In the case of paint oils, however, civilian demand has declined during the war period, reflecting a shortage of pigments and other materials used in paint, a scarcity of skilled painters, and a drastic curtailment of residential building construction.

## Requirements Up

How have these shortages come about? In 1939 the United States imported nearly 2 billion pounds of fats and oils. Since Pearl Harbor, imports have been cut in half, to about a billion pounds a year, but domestic production increased from 8.2 billion pounds in 1939 to 10.8 billion pounds in 1944 when supplies balanced needs fairly well. This year domestic production will be down to about 9.6 billion pounds, with a possibility of a decrease in the billion-pound level of imports of the last 3 years.

Against these diminishing supplies

have been ever increasing military and other war requirements. The prospects of a billion-pound reduction in over-all supplies for 1945, with war requirements continuing large, simply means that civilian supplies will be extremely tight well into 1946. In fact, military requirements for 1945 are considerably larger than in 1944, and lend-lease shipments and exports to liberated areas, while below last year, will still be well above the pre-war level of exports.

## Production Down

The billion-pound reduction for 1945 is mainly the result of 30-percent decreases in lard and linseed oil production, a 4-percent decrease in butter production and a reduced output of greases. The decrease in lard and greases arises from the same factors which have caused a reduction in pork, namely an oversupply of hogs in the winter 1943-44 followed by a sharp reduction in the pig crop in 1944. Butter production is down this year despite the fact that total milk output will be the highest on record. Whole milk products have been in increasing demand during the war years, both for domestic consumption and to meet military and export requirements.

Output of linseed oil is down sharply following a 50-percent reduction in the flaxseed crop in 1944. The large acreages planted to flaxseed in the main flaxseed belt in the past 3 or 4 years has resulted in increased weediness in the fields, a condition harmful to flaxseed. Also, in the spring of 1944, wheat and other small grains offered a slightly more favorable price inducement to farmers in the flaxseed area than flaxseed. In 1945, a special payment of \$5 will be made to farmers for each acre of flaxseed planted as an aid in meeting individual farm goals. This is expected to result in a substantial increase in flaxseed acreage and production this year, but part of the

flaxseed grown in 1945 will not be crushed for oil till 1946.

No improvement in imports is expected this year. Imports in 1945 may be the smallest for any of the war years. Normally a substantial quantity of Argentine flaxseed is imported. This year very little Argentine flaxseed will be available to the United States, because drought cut the crop just harvested in half, and because a large part of the crop is being used in Argentina for fuel. Lack of ocean shipping during the war resulted in a surplus of flaxseed and a shortage of fuel in Argentina which combination of circumstances resulted in a policy of burning linseed oil and linseed cake for fuel. A large part of the crop harvested in 1944-45 already has been burned, and little flaxseed will be available for export until the new crop is harvested in 1946.

#### **Imports Way Below Prewar**

In comparison with prewar years, imports of copra, coconut oil, palm oil, and tung oil, are far below normal. Some copra is now being obtained in the South Pacific Islands and in Ceylon. No copra has been obtained as yet in the Philippines, and little is in prospect this year. Palm oil is being obtained in relatively small quantity from West Africa. The prewar source of supply was the Netherlands East Indies, still held by the Japanese. Tung oil came almost exclusively from China, but China is still largely inaccessible as a source of imports. Although the olive oil exporting countries in the Mediterranean have been liberated, a general shortage of oils and fats in that area precludes the shipment of any substantial quantity of olive oil to this country in 1945.

One factor affecting the supply of fats and oils available for import by the United States this year is the renewal of demand for imports by continental Europe. Before the war continental Europe, excluding Russia, imported approximately 4.5 billion pounds of oils and fats annually. In 1945 there is a minimum need for

about 2 billion pounds of imports to the Continent, but it is doubtful that sufficient surplus supplies exist in the world to meet even this minimum.

World exports of fats and oils before the war amounted to about 10 billion pounds annually, of which roughly a third originated in the Far Eastern areas, still largely cut off from European and Western Hemisphere markets. Another tenth of the world exports before the war was obtained from whaling expeditions in the Antarctic Ocean. Whaling activity this year is on a very limited scale. Even if whaling ships are equipped for the Antarctic, it will be the spring of 1946 before any substantial quantity of whale oil will reach Northern Hemisphere markets.

#### **Prospects for 1946 and After**

Supplies of fats and oils will continue short until the summer of 1946 at least. Production of lard in the United States may increase somewhat next spring and summer, reflecting a larger pig crop in the fall of 1945 than a year earlier. Exports of Philippine copra may reach a fair volume by that time though the copra industry there faces many difficulties. Copra producers are in need of consumer goods to be purchased with the money received for copra. In addition, there is a shortage of inter-island shipping for transporting copra to ocean-shipping points, road communications are poor, and there is a shortage of sacks for handling the copra. Perhaps the greatest difficulty is the lack of ships for transporting copra from the Philippines. Some progress is being made in overcoming these difficulties, but it will be several months at least before any sizable quantity of copra is shipped. It is doubtful if exports of copra from the Philippines will reach prewar levels for 3 or 4 years. Neglect of copra groves during Japanese occupation resulted in lower yields, necessitating rather intensive efforts to rehabilitate the trees. Similar difficulties may be expected in the coconut and palm tree areas of



the Netherlands East Indies and Malaya.

The linseed oil situation may improve in 1946 if production of flaxseed in Argentina returns to the normal level of 60 to 80 million bushels. If the burning of flaxseed products for fuel is stopped, the exportable surplus of Argentine flaxseed in 1946 might be as much as 40 or 50 million bushels. Usually the United States imports around half of its annual crush of flaxseed, which in times of high industrial activity approaches 40 million bushels a year.

European demand for imports of fats and oils, as well as other foods, will be urgent at least until the harvest of new crops beginning in the summer of 1946. This demand for fats and oils will continue relatively strong for several years, reflecting a reduced pro-

duction of animal fats during the war years.

Demand for fats and oils in the United States may be somewhat less in 1946 than it is this year. With some reduction in military personnel likely in 1946, there may be a sizable reduction in procurement of fats and oils by the armed forces. Consumer demand may be weaker, reflecting lower national income. However, as civilian supplies of fats and oils already are far below demand, a weakening of the over-all demand will not depress prices materially. Supplies of fat-and-oil products for civilians in most of 1946 may still not be large enough to meet demand in full, even at the relatively high prices of the war years.

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## What Wheat Policies After the War?

THE position of wheat and the welfare of the wheat farmer in postwar years are of increasing concern. An understanding of changes that have taken place in acreage, yield, production, and utilization of wheat as well as in farm size and mechanization is necessary for adequate appraisal of the postwar demand and supply prospects and for intelligent selection of alternative wheat policies.

### Acreage and Yield Changes

The wheat acreage planted in the Great Plains States<sup>1</sup> has increased from about 60 percent of the national total in the early 1920's to about 70 percent since 1930. In contrast, the more humid areas east of the Plains has seen a longtime downward trend in wheat acreage. Few alternatives to wheat production exist in the specialized wheat areas and consequently acreage changes only slightly when

wheat prices drop. In the higher-risk portions of the Great Plains about the only alternative to wheat production is a shift to a livestock-grazing economy, a radical and difficult shift which can be made only over a period of years and which means fewer operators.

The largest wheat acreage in United States history—81 million acres—was planted in 1937. The adjustment program introduced in 1938 with its new features of conservation, marketing quotas, loans, and crop insurance was more effective than the earlier one of 1933 in achieving acreage reduction. Beginning in 1939 wheat acreage declined, and in 1942 only 52.2 million acres were planted. But after restrictions were removed in 1943, acreage climbed to 65.7 million in 1944 and to over 68 million acres in 1945.

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NOTE: This article is a summary of a more comprehensive report, *Wheat Production in War and Peace*, which was prepared by the authors together with Della E. Marriek and issued recently by BAE—Editor.

<sup>1</sup> North Dakota, South Dakota, Montana, Wyoming, Colorado, Nebraska, Kansas, New Mexico, Oklahoma, Texas.

Wheat yields have increased in all major wheat regions, primarily because of varietal improvements to combat drought, diseases, and insects; greater use of soil and moisture conserving practices such as summer-fallow; and mechanization by improving timeliness of operations. A definite upward trend in yields is apparent in the soft red winter and Pacific Northwest wheat regions, and even in the Great Plains after adjustments are made for major changes in precipitation and temperature. Planted acre yields for the United States averaged 12.3 bushels during 1919-23 compared with 16.4 bushels during 1941-44. Most of this 4-bushel increase seems attributable to such factors as improved varieties and better farming methods because weather conditions were generally the same in both periods.

#### Farm Size and Mechanization

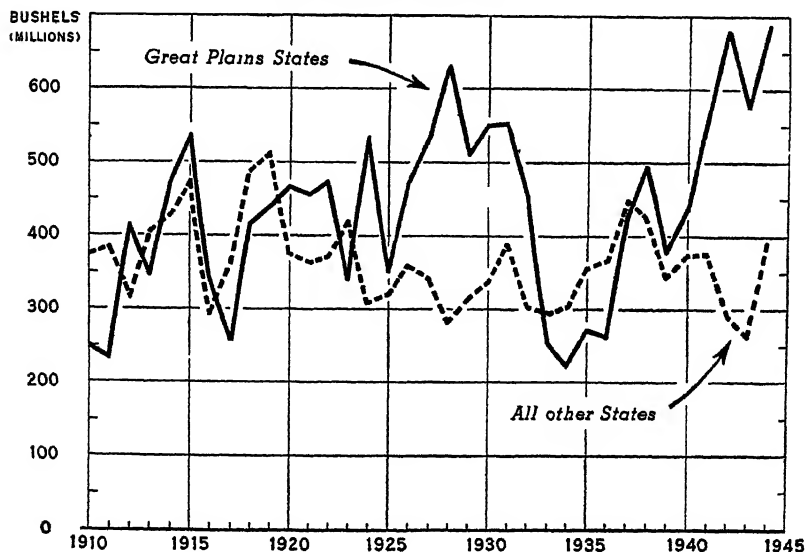
Farms in the wheat areas are now much larger than before World War I. Typical family-operated wheat farms in the heart of the hard winter wheat

region increased 88 percent in size, and 94 percent in acreage planted to wheat per farm between the two periods 1910-14 and 1938-42. The changes in this area represent the general trend of change in all of the major specialized wheat areas.

The tractor and combine have revolutionized wheat farming since 1910, making possible the increases in size of farm through reductions of over half in the amount of labor required per acre in the specialized wheat areas.

Primarily because of these changes in size, mechanization, reduced labor requirements, and increased wheat output per farm, the average return per farm is significantly greater now than in the 1910-14 period. Returns to operators of typical wheat farms in the hard winter wheat region were almost twice as much during 1938-42 as during 1910-14, after making appropriate adjustments for changes in costs of production and in price levels between the two periods. However, these typical wheat farms are larger than many and the degree of adjustment has been greater. Many farms

WHEAT PRODUCTION, GREAT PLAINS STATES AND ALL OTHER STATES, 1910-44



producing wheat have not adjusted so well to changing conditions and are too small and inefficiently operated to provide adequate incomes.

### Production and Utilization

The volume of wheat produced in the United States tends to fluctuate considerably as a result of wide year-to-year variations in yield and acreage. Production has varied from 526 million bushels in 1934 to over 1 billion bushels in 1944, and has averaged about 800 million bushels annually from 1910 to 1944. Production in the Great Plains is much more variable than in the rest of the United States, and the spectacular changes in this region largely determine whether the national production is high or low, as production in all other States as a group is relatively stable. (See chart.)

Contrasted with the variability of production of wheat from year to year, consumption is relatively stable. Most of the small variation in domestic disappearance is in the quantity of wheat fed to livestock rather than in the quantity milled for human consumption. Although domestic consumption has increased over a period of years, the increase has been less than the increase in population.

From 1912 to 1928 exports were around 200 million bushels and were sufficient to clear the market of current supplies. Stocks at the end of the year seldom exceeded 140 million bushels. With the decline in exports beginning in 1927 stocks pyramided to high levels, were reduced following the drought years, but increased to over 600 million bushels in 1942 and 1943. Surplus stocks have been reduced as a result of two catastrophes—the drought of the middle 1930's and World War II. Large quantities of wheat have been used for livestock feed, exports, and alcohol manufacture in the last few years under subsidy programs.

The position of United States wheat growers in the world of tomorrow will depend upon many things but chiefly

upon the volume of market outlets for wheat and whether there will again be more wheat than can be disposed of by the usual market procedures at prices satisfactory to wheat growers.

Increasing the utilization of wheat depends mainly upon increasing export and the amount used as livestock feed. Postwar utilization of wheat appears likely to range from a probable minimum of about 785 million bushels to a probable maximum of about 925 million. A low level of about 110 million bushels for livestock feed and 60 million bushels for export are assumed in the minimum utilization estimate.

Today the wheat production potential is larger than ever before. Improvements in yields per acre combined with lower production costs, resulting from increased yields, larger farms and greater mechanization, probably will mean greater output per farm and a larger total acreage planted than formerly—under the same price conditions.

### Larger Yields in Future

With normal weather and expected improvement in yields, the yield per planted acre for the United States in the postwar period (about 1955) should average about 14.4 bushels, compared with an average of about 12.5 bushels per acre since 1919. The average planted acreage for the last 35 years is 60 million acres. Such an acreage in the postwar period would produce about 950 million bushels, or 3 percent above the estimate of probable maximum utilization of 925 million bushels. If, however, the postwar demand approximates the estimate of minimum utilization of 785 million bushels, a planted acreage of only 54 million acres would be necessary at the indicated average yields.

Because of lack of alternatives in the specialized wheat areas, wheat acreage does not respond readily to changes in demand. At the higher level of utili-

zation in the postwar period little difficulty with wheat surpluses would be expected. If, however, postwar utilization more nearly approaches the probable minimum, burdensome surpluses would accumulate.

### Policy Alternatives

The concept of parity returns for farmers has been fairly well accepted as a part of agricultural policy. They can be achieved in several ways, but most of the discussion in recent years has been in terms of parity prices.

Maintenance of parity prices for wheat in the postwar period on the present basis of calculating parity with no production control probably would result in an acreage at least approaching if not greater than the peak of 81 million acres planted in 1937. Such an acreage would produce more than 1 billion bushels of wheat with normal weather. Obviously, surpluses would mount rapidly and would soon be unmanageable. Such a course can be eliminated as a practical wheat policy. What, then, are the alternatives?

One alternative is parity prices with rigid production control and marketing quotas. Under such a policy wheat utilization would approach the estimated minimum of 785 million bushels, or even less if exports were not subsidized. With parity prices for wheat its use as livestock feed would be relatively small. Production of 700 to 785 million bushels could be obtained on 48-52 million acres. Limitation of wheat acreages to the extent necessary would result in underutilization of resources on 10 million or more acres of land in the wheat areas. Even if substitution of feed crops were permitted on the acreage taken out of wheat, underutilization would exist in many areas where wheat is the only well-adapted crop. High prices of wheat to growers would be partially offset by higher unit costs of production because of a smaller volume of wheat per farm on a restricted acreage. There would be a smaller volume of business in food

processing, distributing, and transportation industries. Substantial administrative costs would be necessary for such a program.

A second alternative is to maintain parity or near parity prices of wheat for food uses, and permit a free market price of wheat for feed and exports. Average returns per bushel would be less than parity, depending upon the proportion of total production going into commercial feed and export outlets, and upon the level of prices for export wheat and feed grains. Such a program would obtain approximately full utilization of resources. There would be only indirect restrictions on acreage and therefore little effect upon the volume of wheat handled by wheat processing, distributing, and transportation industries. This two-price policy would involve substantial administrative expense also.

A third alternative is to pursue a policy aimed at unrestricted production and marketing, to permit prices to stabilize at levels that clear the market for all uses. This alternative is based upon the proposition that the best and most effective way to obtain adjustment of the use of production resources to effective demand for each product is through the free interplay of prices in the open market. Consumers would be supplied with wheat products at competitively determined levels; and wheat processing, distributing, and transportation industries would have the volume of business and employment coming from unrestricted production.

The repercussion of such a policy in the wheat areas would be minimized if the transition were made over a period of years with gradual declines in prices and relatively prosperous general economic conditions to provide alternative opportunities either on farms or in industries. If the transition from supported domestic prices to world market prices were made rapidly even over a period of 2 or 3 years, severe hardships would develop on many wheat farms.

Various combinations of the above three major production and price policy alternatives for wheat are possible. Under each of the policies a number of different programs might be adopted that would be helpful to wheat farmers in making desirable adjustments and stabilizing resources and production, such as soil-conservation programs, crop-insurance programs, and credit programs.

### Conversion Program Requirements

Assuming that national policy is aimed at a freely functioning market price for wheat in the postwar period, a well-considered conversion program could assist materially in bringing about adjustments and in alleviating stresses associated with the adoption of such a policy. Wheat farming has been carried on for a number of years with a cost-and-income structure, land values and taxes based upon higher than world-market prices. Although mechanization is almost complete in the specialized wheat-producing areas, high-cost methods of operation still persist on many farms where farm size is too small and machinery and other investment items are too high per unit of output to permit low-cost operation. The price of wheat necessary to keep such units in a solvent position, and to provide an adequate family income, is far above what is needed to return a good income on larger, more efficiently operated family farms. Adjustments in farm size and in reorganization of many units for increased efficiency would be one of the major goals in a conversion program designed to enable farmers to obtain adequate incomes under a free-market price system.

A comprehensive conversion program for the wheat areas would involve (1) more efficient operating units, (2) machinery and cropping systems adapted to the farm to spread overhead costs over more units of production, (3) adoption of conservation practices to provide long-time stability to farming in the area, (4) combining livestock and wheat production where

conditions permit, especially in the high-risk areas, (5) a crop insurance program with inclusive coverage.

Such a conversion program would need to be facilitated by special credit help, purchase of submarginal land, and employment service and training facilities for those who wished to find other work. A period of 5 to 10 years might be needed to make the transition. During this time a policy of gradual withdrawal of the wheat price support could be followed so that at the end of the period prices for wheat would be on a free-market basis.

Many farmers could make the transition without special help, but conversion payments and other assistance might be given those wanting to make desirable changes based on long-time farm plans.

When completed, such a program could result in full utilization of resources in specialized wheat areas. Most farms, if organized on an efficient family farm basis, could compete successfully and provide adequate incomes even in periods of only moderate prosperity. While there would be fewer wheat farms than today, those farmers who remained in wheat production would not need Government assistance to survive as wheat producers and would be free to produce whatever they wished.

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ERNEST R. AHRENDL  
*Bureau of Agricultural Economics*

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*Part-time Farming.* Earl H. Bell, and Orlin J. Scoville. U. S. Dept. Agr. Farmers' Bul. 1966, 18 pp. Printed. Washington. March 1945.

Written as a guide for those who are looking for part-time farms, especially for men returning from military service.

*If You're Thinking of a Little Place in the Country.* A. B. Genung. AIS 14. Printed. 12 pp. Bureau of Agricultural Economics. Printed. Washington, 1945.

Gives the reader a glimpse of how some part-time farming ventures have worked out.

# Surplus Property for Farmers

**F**ARMERS receive special recognition in the Surplus Property Act of 1944. Section 17 of the act says that the Surplus Property Board must "devise ways and means" for the sale of surplus property "in such quantities in rural localities and in such manner as will assure farmers and farmers' cooperative associations equal opportunity with others to purchase." The act also provides for the development of programs for the sale of surplus trucks, farm machinery and equipment to ease the difficulties in maintaining a high level of farm production.

The Surplus Property Board was created by the act to be the over-all agency to establish policies on the disposal of surplus property. The Board does not sell a thing—not a single spade or thimble. It designates "disposal agencies" to make actual sales. The disposal agency most concerned with the things a farmer uses is the Commerce Department, which handles surplus property through regional offices located at Atlanta, Boston, Chicago, Cincinnati, Denver, Fort Worth, Kansas City, New York City, San Francisco, Seattle, and Washington, D. C.

## Many Small Items Now Ready

The Board has issued "Regulation No. 3" which sets the pattern for channeling surplus property into agricultural uses. This regulation says, in effect:

First, that the disposal agencies will channel appropriate quantities of surplus property into rural areas so that farmers and farmers' cooperative associations will be given equal opportunity to buy.

The War Food Administrator cooperates in setting up lists of surplus goods to be so channeled to farmers as ultimate consumers. The current list under Regulation 3 is: (1) Lumber, paint, wire and wire fence, pipe, netting, rope, posts, roofing, and siding; (2) forks, hoes, mattocks, axes, picks,

adzes, chain, post-hole diggers, rakes, scrapers, and shovels; (3) wrenches, pliers, vises, belt cutters, pipe stocks and dies, hammers, wrecking bars, saws, and chisels; (4) binder, tobacco and wool twine; (5) electric motors adaptable for farm use, electrical wiring and equipment; (6) harness and harness hardware.

It is important to note that, although these items are being set aside from available surpluses, and in proportionate amounts, for eventual use in rural areas, it is not contemplated in the regulation that they necessarily will be sold direct to individual farmers.

The Government hopes to get these surplus goods into the desired hands faster and more cheaply by selling to regular distributors, farmers' cooperatives, or retailers who certify that they will re-distribute the items in rural areas. The final buyer is protected by price ceilings. Most surplus consumer goods are now being disposed of this way.

However, there will also be sales of these and other surplus goods in rural areas by other means, if the Government finds such means desirable.

## Larger Equipment Through AAA

Second, the rural disposal regulation provides that, if the War Food Administrator finds farm production impaired or likely to be impaired in a given area because of shortage of trucks, machinery, and equipment, he will certify to the Board what is needed and where—and the Board will order disposals accordingly in the amounts it deems feasible.

The surplus trucks, machinery, and equipment thus allocated will be sold to regular retail dealers and farmers' cooperative associations that agree to re-sell only to farmers or farmers' cooperative associations in the area specified. To buy a truck, these prospective purchasers must

have certificates issued by the Agricultural Adjustment Agency.

In addition, of course, a farmer may, if he chooses, purchase any available surplus property like the general public. And if the prospective purchaser is a veteran of this war, he may buy up to \$2,500 of surplus property to start his own farm or business, through special facilities provided by the Smaller War Plants Corporation, under a certificate issued by the Department in addition to any purchases he may desire to make on a regular basis.

While practically every normal civilian commodity may be expected to crop up in surplus eventually, it should always be remembered that surplus property was originally created for war purposes. Much is not directly adaptable to farming or other civilian uses. Nevertheless, thousands of surplus items are being put into productive use on farms every month. And a definite attack is being made on the problem of reconditioning or adapting other surplus equipment to agricultural and rural uses.

Ingenuity is making many types of war surplus useful in peace. For example, plans are under way to dispose of surplus Army field hospital units for use in counties requiring mobile public health services. And recently 50 weapon-carriers were sold in California for use as wagons or trucks. Adaptations of this kind promise to provide a major part of the practical uses to which surplus will be put.

A great proportion of all surplus equipment is in more or less "fair" condition. After all, much surplus is second-hand. A considerable part of surplus farm machinery, for example, has been found to need repairs.

What will be available at a given time cannot be known; in fact, it is not possible to know in advance the things that will be declared surplus by the Army, Navy, or other owning agencies. Thus surplus cannot be ordered in

advance as from a catalog. And surpluses appear in out-of-the-way places and in all amounts, although every effort is made to centralize the location of farm machinery available for sale.

These are some of the reasons why the disposal of surplus property is not a normal merchandising job. Accordingly, to effect the orderly and equitable disposal the Commerce Department sells surplus items of possible use to farmers through regularly established dealers in those commodities. These dealers, who include farm co-operative groups, are equipped to repair, service, and distribute surplus property. By selling through normal channels of trade the Government avoids the costly and complex organization that would be required to sell each surplus spade or wheelbarrow direct to final users.

Sales of farm equipment to dealers are now made through "spot sales." At these sales, which are held frequently at different places throughout the country, bids are made "on the spot" for items previously announced as being for sale. The highest bid is awarded immediately and payment is made in full. The dealer cannot re-sell above specified ceiling prices.

Surplus trucks are examples of surpluses in short supply that are allocated to dealers for re-sale in areas of greatest need. Four million bushels of milo maize were saved in southern Texas at harvest time recently with the help of surplus trucks.

Surplus property is a national asset, and the objective of present disposal procedures is to realize that asset to the fullest possible extent. Already millions of dollars worth of surplus have been disposed of for use in rural areas and for agricultural purposes. In this way surplus property, the relic and waste of war, contributes to war food production. This helps in the prosecution of the war—still the main objective.

SIERT RIEPMA  
*Surplus Property Board*

# Appraisal of Agricultural Goals Program

AT THE outbreak of the war agriculture was faced with the task of converting to a wartime basis to turn out the volume and kinds of food, fiber, and oils most needed. It was not sufficient to obtain just more production but production suited to special war needs. And to get the increased production of the farm products most needed, considerable shifting of enterprises had to be undertaken.

Because the usual demand and price relationships could not be relied on, it was necessary to establish some means of bringing about the production adjustments called for. Programs to effect these shifts without jeopardizing unnecessarily the long-time farming possibilities of individual farms were desirable. The establishment of agricultural goals and the development of programs to assist in their achievement constituted the basic approach.

## The Goals Method

In its conception the goal method of approach was not greatly different from that followed in other phases of the war program. In industry goals were established for the production of airplanes and merchant ships. However, three points must be kept in mind in any comparison with the record of industrial production in an appraisal of the record of food production during the war.

In the first place, the appraisal must allow for the fact that weather influences production. So far during the war the weather has been favorable for crops. Secondly, food production must be proportionate to the production of all other war necessities, so the battle fronts will not be critically short of anything. Because food production draws partly on the same pool of resources that supplies the fighting men—the ships, the planes, the tanks, the guns—it is not feasible to set the food goals at such high levels that would be at the expense of other needs.

Thirdly, the production must be within the capacity of the agricultural plant, considering land capacity, equipment available, and labor supply.

The goal program attempted to provide the best possible balance between total requirements and the production capacity of agriculture. Commodity committees brought together basic information and developed suggested goals for the various commodities. These goals were studied to see whether they were in harmony with each other, whether excessive competition for land and labor in the same area would arise, whether goals for feed crops were correctly adjusted to the goals for livestock, and whether total acreage of all crops was in line with the acreage of land available. Finally the suggested goals were considered by farmers and State and local agricultural officials, and the final goals were established.

The final goals provided a measuring stick to gauge requirements of the various factors of production and marketing in supplying the resources necessary to meet the production pattern established. Adjustments in programs were made after periodic analyses of the possibilities of goal attainment to help correct difficulties encountered by farmers in achieving the goals.

## Aids to Goal Achievement

The major question on what the goals accomplished arise in the application of the methods employed in achieving the goals. In their achievement emphasis was placed on informing farmers of the kinds and quantity of agricultural products most needed in a given year to meet the demands of the war. Considerable reliance was placed on the use of price supports to bring forth the needed production. Farmers were instructed on ways to improve production methods. Conservation practices, which had stored up fertility on farms, were continued



in order to insure sustained output of needed crops. Assistance was given in obtaining needed labor and production supplies, including feed, fertilizer, machinery, and providing marketing facilities—transportation, storage, processing facilities, and containers.

Various other methods to assure goal achievement were utilized to a limited extent. Direct controls on agricultural production, which had been in effect before the war, were gradually relaxed and by 1944 the only controls were the marketing quotas on two types of tobacco. Special emphasis was placed on designated war crops. Incentive payments were used to get increased acreage of certain crops and to compensate farmers for their added costs in achieving the increased goal. The dairy subsidy payment plan to protect dairy farmers against increases in feed costs became effective in 1944. And an attempt to manage scarce production inputs was made in 1943 with the classification of commodities into "essential" and "nonessential."

The War Units Plan for occupational deferment for agricultural workers was put into effect in 1943. Regional Agricultural Credit Corporation loans were made available for the production of essential food and fiber for the war to insure producers against loss on high risk crops or crops they would not otherwise undertake to grow. Contracting between the Government and individual farmers was used in the production of hemp.

#### **Emphasis Shifted During War**

The first years of the war saw an attempt to convert feed supplies from the Ever-Normal Granary into food supplies for improved nutrition in the country and to meet the critical needs overseas. The need for direct food crops, particularly dry beans, dry peas, rice, and potatoes was emphasized. Increased production of oil crops was greatly needed to offset reductions from the Far East. A large production of long-staple cotton and of hemp was requested because the

imports of these commodities were shut off, but changes in the import situation decreased the need for cotton and hemp a year later.

Stocks of wheat and cotton were large at the beginning of the war, and some agricultural manpower and other resources could usefully be diverted from these to other crops. But by 1944 the wheat goal was increased 12 million acres over the preceding year's acreage because wheat was badly needed for feed and in the alcohol program, and because large increases in requirements for military and relief feeding appeared likely

The changing feed situation brought a major problem of balancing livestock output with reduced feed supplies in planning the 1944 goals program. It was not possible to increase feed supplies substantially and still maintain acreages of other vitally needed crops. Therefore, goals for livestock numbers in 1944 had to be reduced.

During the 5 years emphasis changed from one in which all-out production was desired, with goals considered as minimums, to one in which goals were on a more selective basis to meet changing demand conditions. By 1945 farmers were urged to come as close as possible to the production pattern established if shortages on the one hand and marketing difficulties on the other were to be avoided.

#### **The Production Record**

In each of the war years, farmers topped the previous year's production record, with 1944 output a third more than the average for the prewar years of 1935-39. The total production of crops for sale and home consumption in 1944 was 125 percent of this 5-year average and livestock production was 139 percent of the average.

The acreage of goal crops planted or grown increased from 348 million as an average in 1935-39 to 354 million in 1944. The crop pattern showed many shifts as well as increases from prewar years. In addition to a larger

total acreage, yields per acre increased as a result of favorable weather, better farming practices, and a wartime demand for maximum effort on the part of farmers. The increase in production thus exceeded the increase in acreage.

### **Oil Crops Increased Most**

The greatest increase, both in acreage and production as a percentage of the prewar years 1935-39, was in the oil-bearing crops—soybeans, peanuts, and flaxseed—and reflected the wartime demand for these crops. The acreage of soybeans harvested for beans for the years 1942 through 1944 averaged 340 percent of the prewar years. Flaxseed acreage reached a high of 325 percent in 1943 and averaged over 240 percent of the prewar years. The acreage of peanuts picked and threshed increased over 100 percent.

Of the direct food crops, the dry pea acreage and production showed the greatest percentage increase. Acreage averaged nearly 250 percent of the 1935-39 average and production approximately 350 percent. The production of dry beans averaged 128 percent and rice 148 percent of the 1935-39 average. The acreage of wheat for the 3 years was approximately 80 percent of the 1935-39 average, while the production was 127 percent of this period.

Although the potato acreage was below the prewar average, except in 1943, production was above the average for each of the 3 years 1942-44, and in 1943, aided by record yields, exceeded the average by 31 percent. Difficulties developed in marketing this large production.

The acreage in vegetables for processing was increased one-third over the 1935-39 average in 1942 and was held at approximately this level in the next 2 years.

Very substantial increases were made in the acreage of cover crop seeds during the past 3 years. The increase amounted to 250 percent over

the prewar average while hay crop seeds increased nearly 50 percent.

The acreage of tobacco which had been held down to approximately 85 percent of the 1935-39 average was allowed to increase in 1944, when it was 5 percent over this average.

Acreage of hemp fiber was increased from a prewar base of less than 10,000 acres to 178,000 planted in 1943. Changing war conditions reduced the need so that in 1944 the acreage planted was approximately 70,000 acres, with further reductions in prospect for succeeding years.

Sugarcane acreage increased 6 percent, but sugar beet acreage for the 3 years averaged only 72 percent of the 1935-39 average despite a goal increase of 11 percent.

The acreage in cotton was held to 77 percent of the 1935-39 average, but better than average yields resulted in a production only 7 percent below average.

Goals for feed grains and forage crops did not involve large acreage increases because of the demand for direct food and oil crops. The acreage of corn, oats, and barley for the 3 years averaged only 2 percent above the acreage during 1935-39. Better than average yields resulted in a production of feed grains considerably above average.

### **Greater Livestock Output**

Rapid increases in livestock production were made in response to the price stimulus and appeals to meet military and lend-lease requirement. Production of milk in 1941 was 11 percent over the 1935-39 average, eggs 15 percent, and hogs 23 percent. In 1942, production of poultry and eggs and of meat animals was approximately one-third over the 1935-39 average. Dairy production was 15 percent over this prewar average and was maintained at about this level for the next 2 years. Further large increases in production of meat animals and poultry were made in 1943. But in 1944 goals called for decreases in order to bring total live-

stock numbers in balance with feed resources.

Commercial broiler production made the most rapid increase during this period, being nearly 200 percent in 1942 and 260 percent in 1943 over the 1935-39 average. Goals for broiler production in 1944 were reduced to 80 percent of the 1943 production because of lower feed supplies. Production in 1944, however, was only 8 percent below 1943. Egg production increased each year, being 33 percent above the 5-year prewar average in 1942, 49 percent above in 1943, and 59 percent above in 1944.

### Appraisal of Results

The record of production is one of which the Nation's farmers can be justly proud. Per capita food consumption in this country has been at high levels, higher than before the war. Likewise, the pattern of consumption insofar as kinds of food are concerned has not been drastically shifted. In addition large food supplies have been sent to other countries.

The food produced has not supplied every person with all the food of each kind desired nor did the production program attempt to reach these heights. To have done so would have wasted resources.

In the early part of goals work particularly there was some inconsistency in the application of the goals for different commodities. Some goals were established with the hope that they would be exceeded and others with the hope that they would not be exceeded. Likewise, there was a

tendency to make some goals essentially estimates of production which might be expected.

Probably the greatest criticism of the goals program during this period is the time lag in making the adjustments to meet rapidly changing conditions. Hesitancy in taking the necessary steps in time to bring about desirable production adjustments or failure to adopt drastic enough measures may have resulted in ultimate waste of resources and production below levels which might have been attained.

These criticisms are not intended so much to point out shortcomings of the goals program as they are to emphasize the fact that the goals approach in itself does not provide automatic controls. If the program stops after the goals are established, then there is little gained. The key to the goal approach is that the pattern established serves as a guide for taking the necessary actions to assure adjustments in production.

What of the future? Is the goals approach worth retaining for the immediate future and for the postwar adjustment years?

The answer as shown by the results achieved must be an affirmative one. Establishment of balanced production goals promptly backed by action programs consistent with the goals, at least for certain commodities, have many possibilities for preventing serious agricultural problems when peace comes.

PHILLIP F. AYLESWORTH  
*Agricultural Adjustment Agency*

## The Increasing Importance of the Peanut

THE PEANUT is probably the country's most unusual crop. None other grows like it and, except for the soybean, none other has increased as much in production. A hundred years ago the peanut was almost a novelty and at best only a side crop. Today, it provides the

principal source of income to many thousands of growers, with a value well above \$200,000,000 for each of the past 3 years.

Today, the peanut has the proverbial "thousand and one" uses, with virtually all of it utilized. In addition to being eaten roasted, or as peanut

butter or as candy, the peanut produces oil which has many uses. It is a superior cooking and salad oil—being especially preferred for cooking in submarines because under high temperatures it does not smoke as much as most cooking oils. It is also used in industry as a lubricant—one of the most interesting is as a film sprayed on airplane motors and other machinery shipped overseas to prevent rust. And peanut meal is widely used in livestock feed.

Although its history is obscure, most authorities agree that the peanut is indigenous to South America. It was probably grown for centuries there by the Indians before the discovery of America. Introduced in early days to Africa and the Orient, it has long been an important export product of India, China, and Africa. Before the present war, France and Germany together imported more than twice the quantity of peanuts produced annually in the United States.

The peanut is believed to have been brought to this country from Africa by the early traders in colonial times. Before the middle of the last century peanuts were grown primarily for home use in various sections of the South and were designated differently in many areas. "Goobers" was the name given to peanuts by the slaves, while "pinders" or "ground peas" were common terms also, which are still used occasionally where peanuts are grown.

### **Fruit Matures Underground**

Peanuts require a fairly long summer—the reason why they cannot be grown too far north—and do best on fine sandy loam to sandy clay loam, but will grow on relatively poor, light soils if properly drained. The peanut is distinctive in the manner of producing its fruit. When the flowers have been fertilized, the stems turn downward and enter the ground. This is called "pegging" and at this season, consistent moisture is needed to condition the ground so that the pegs can

penetrate the crust. On these pegs the peanuts are formed underground.

### **First in Virginia as Cash Crop**

The first area to develop peanuts as a cash crop was the southeastern corner of Virginia. Soon the neighboring counties in North Carolina were raising peanuts commercially and by 1909 the total acreage picked and threshed in the Virginia-Carolina area had grown to almost 350,000 acres, about 65 percent of all peanuts grown for edible purposes in this country. The acreage in this area remained near this level for a good many years, the 1933-42 average being 388,000 acres. But the heavy wartime demand for peanuts brought the 1943 and 1944 acreage to about a fifth above the level prevailing before the war.

With the coming of the boll weevil to southern Georgia and Alabama and northern Florida after the turn of the century, cotton growing suddenly was faced with insuperable hardships and in a great many cases its further production became unprofitable. Although peanuts had been grown in those sections mostly for hogs prior to that time, the severity of the damage caused by the boll weevil forced cotton farmers to diversify, and the extension of peanut production was a logical result. While there was expansion in the production of peanuts for hogging, the largest increase was in peanuts raised for picking and threshing. The acreage in the latter category, in Georgia and Alabama, increased from 100,000 acres in 1912 to 770,000 acres in 1932, and well over 1,500,000 acres were harvested in each of the last 3 years, nearly twice the 10-year average from 1933-42.

The Southwestern area—Texas, Oklahoma, Arkansas, Louisiana—is the third important peanut-producing region of the country. The acreage picked and threshed in this area went from 58,000 acres in 1912 to a high of 292,000 acres in 1917, which was not exceeded until 1938. Since then the

acreage has increased steadily, with the 1933-42 average over 400,000 acres. During the past 3 years, the acreage has averaged well over 1,100,000 acres.

### High Priority War Crop

With imports of oils from the Orient cut off shortly after Pearl Harbor, peanuts, like soybeans and flax, became a high priority war crop because of direct military requirements as well as to meet the gap in civilian needs. This accounts for the phenomenal acreage increase in the three important producing areas during the last 3 years. The total United States acreage picked and threshed in 1942, 1943, and 1944 averaged over 3,300,000 acres, twice the 1,648,000-acre average for the decade (1932-41) previous to the war.

But production has not kept pace with the expanding acreage because yields have tended to decline as more land has been put into peanuts. The greatest acreage expansion has taken place in the Southwestern area where yields are normally low. A severe drought in the Southwestern area in 1943 brought a near failure to the peanut crop there and arrested the expansion of acreage. In spite of these handicaps, total United States production has exceeded 2 billion pounds in each of the last 3 years, compared with less than 1½ billion pounds for the 1937-41 average. The all-time record was set in 1942 with 2.2 billion pounds, followed by large crops in 1943 and 1944, averaging well over 2 billion pounds.

### Wide Variety of Uses

Like the soybean, the peanut has had an ever increasing number of uses, especially in recent years. It is said that the circus gave impetus to the public acceptance of peanuts throughout the country toward the end of the last century. Before that time, most of the peanuts were used locally.

The first peanut butter made its appearance just before 1900, but its distribution was small for a number of

years. But peanut butter was found to be high in food value, having about three times as many calories per pound as beef steak, being high in protein and vitamin content, and being readily digestible. First sold as a health food it has gradually grown in public favor until today more than 40 percent of all shelled peanuts produced in the United States go into peanut butter, some of which is used in candy and bakery products.

Paralleling the increased use of peanut butter has been a growing demand for salted peanuts. Second only to peanut butter, they accounted for almost one-third of all shelled peanuts used in 1944.

Total disappearance of shelled edible peanuts for each of the past two seasons beginning on September 1 averaged about 800,000,000 pounds. The present season is exceeding both of the previous years. This compares with the average disappearance of 480,000,000, pounds for the two prewar seasons of 1939 and 1940.

About 1,000,000 acres of peanuts are "hogged off" each year. The tops of the peanuts dug and picked or threshed also provide livestock feed. Peanut cake, the residue left after the oil has been extracted, is a high protein feed concentrate which is usually ground into a meal and is used in producing mixed feeds.

Peanut hulls make a good fertilizer filler and conditioner. Greasy motors may be quickly and efficiently cleaned in a fraction of the time ordinarily required by using ground hulls blown in under pressure. And peanut oil is used more and more in industry though this use is still a small part of the total utilization.

### Uses Channeled by War

Because of the tight situation on fats and oils supplies during the war, and because of the top war need for both peanuts and oil, farmers have been encouraged through price guarantees to expand production. This necessitated some central control in

order to have supplies available for the several uses.

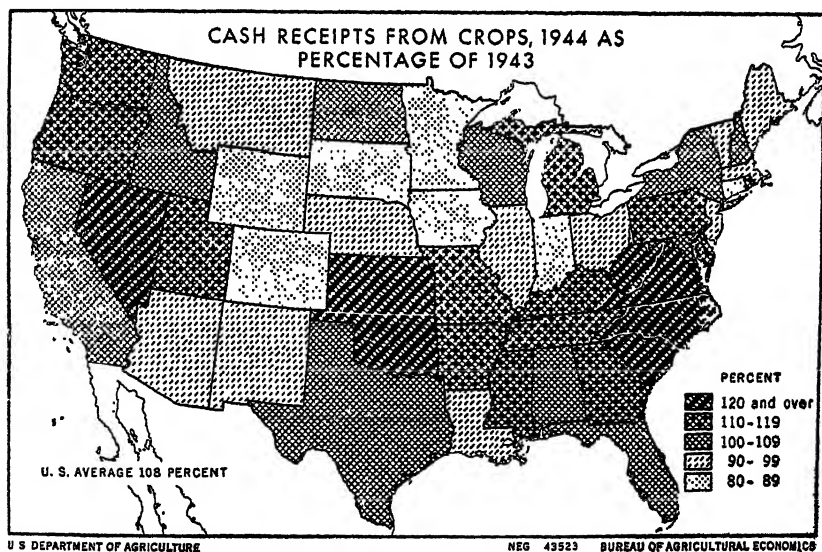
The practice of requiring all shelled No. 2 grade peanuts to be crushed for oil was instituted with the 1944 crop and has served a useful purpose not only for obtaining the needed oil but the public is assured that food products are made from the No. 1 grade. If this practice of using only No. 1 grade peanuts for food products is continued, postwar prospects point to the need for a high level of peanut production. It requires about 15 percent more farmers' stock peanuts on the average to produce 100 pounds of shelled No. 1's than to produce the same quantity of No. 1's and No. 2's combined.

Any statistical comparisons among the products made from peanuts currently would hardly be valid from a long-term point of view because Government actions to meet military requirements have had considerable effect on the pattern of demand, or rather use, during the war. While consumption of shelled peanuts in recent years has exceeded all former records, it was not as great as it would have been if sufficient amounts of

peanuts had been available at all levels of distribution. The candy industry, for example, which has been plagued with shortages of sugar and cocoa, as well as peanuts, has not been able to use its normal proportion of peanuts. On the other hand, peanut butter is almost unknown in Europe and most countries of the world, though small lend-lease shipments may have whetted the appetite of many abroad. Its popularity here, however, indicates probable revolutionary developments for the industry in the years ahead if its uses become as well known in foreign countries.

### Big Production for the Future

No one can predict future demands with any degree of scientific accuracy, but if the demand for shelled edible peanuts in the following 2 or 3 years should be about 10 percent lower than the average takings of the last 3 years, and if crushing of all No. 2 shelled goods should continue, consumption of shelled edibles would be about 720,000-000 pounds. To obtain that quantity of shelled No. 1's would require about 1,300,000,000 pounds of farmers' stock peanuts for shelling.



In addition, it would be necessary to make some allowance for cleaned peanuts for roasting, for farmers' stock peanuts for crushing, for usual requirements for seed, and for home use. This total would probably aggregate 500 000,000 pounds, which added to requirements for shelled peanuts, would indicate the need for crops of

1.8 billion pounds or more. Such crops would be larger than any crop before the record one of 1942 when 2.2 billion pounds were produced, and would be only a little under the 2.1 billion pounds produced in 1944.

JOHN F. MARSH  
*Bureau of Agricultural Economics*

## National Farm Safety Week

**P**RESIDENT Truman has proclaimed July 22-28 as National Farm Safety Week. In doing so he is continuing a practice inaugurated last year by the late President Roosevelt.

The observance of such a week, long urged by the National Safety Council and endorsed by many other organizations and institutions, including the Department of Agriculture, is calculated to reduce the heavy annual accident toll among farm people. Farming, by reason of the many types of machinery used and the different classes of animals handled, involves numerous possibilities of accidental injuries which all too often prove fatal or permanently disabling. And a far greater number of less serious injuries result in temporary disability. In addition to the accidents that occur in actual farm operations, home and road accidents also take a heavy toll among farm families.

### 17,000 Fatal Accidents a Year

According to estimates by the National Safety Council, fatal accidents occurring to farm people in the United States number more than 17,000 per year. This loss of life to farmers, their families, and hired help, plus the larger number of permanent disabilities incurred in nonfatal accidents for which no satisfactory estimates are available, plus the yet greater though unknown number of accidental temporary disabilities, constitute all told a burden on the farm population, in terms of sorrow, suffering, loss of productive work, and un-

expected financial outlays that can hardly be overemphasized.

Accidents occurring to farm workers while actually engaged in farming, according to the National Council, result in some 4,500 fatalities per year. The number of nonfatal accidents to this same class of workers which result in disabling injuries, either permanent or temporary, is estimated by the same authority at 225,000 per year. This accident toll to farm workers even when viewed coldly from an economic viewpoint, as a drain on agriculture manpower, is a serious and challenging problem. This is particularly the case under existing conditions when the labor supply on the farm is seriously depleted, while at the same time a record production is urgently needed.

Most accidents on the farm as elsewhere are the result of carelessness or the failure to take necessary precautions. The purpose of National Farm Safety Week is to bring home to all farm people, so far as possible, the importance to them and to the Nation of applying available preventive measures against accidents. During this week the causes of farm accidents and the means for removing or neutralizing these causes will be stressed in the farm press, and on the radio systems as well as by means of posters, mail stickers, and other available devices.

### Causes Widely Known

The leading causes of farm accidents are widely known, but on the

**Percentage Distribution of Fatal Farm-Work Accidents by Geographical Divisions and by Two Principal Classes of Causes, 1940-43**

Geographic division	Fatalities by principal classes of causes		
	Machinery	Live-stock	Other
	Percent	Percent	Percent
New England.....	40	18	42
Middle Atlantic.....	46	19	35
East North Central.....	52	17	31
West North Central.....	50	21	29
South Atlantic.....	38	23	39
East South Central.....	34	23	43
West South Central.....	47	23	30
Mountain.....	45	28	27
Pacific.....	50	18	32
United States.....	47	21	33

relative importance of these causes, except in the case of certain broad classifications, very inadequate information is available. Much additional and more specific information is needed for a thoroughgoing educational program in farm accident prevention.

The Bureau of Agricultural Economics recently arranged for some additional analysis of certain limited data on fatal farm-work accidents gathered by the Vital Statistics Division of the Bureau of the Census. These reports cover a total of 7,851 such fatalities that occurred during the 4-year period 1940-43, representing an average number per year of about 2,000. According to these reports, 47 percent of the fatalities resulted from accidents in connection with farm machinery and 21 percent of the total resulted from injuries in the handling of farm animals. By geographic divisions, machinery accidents were particularly predominant in the North Central and Pacific States and less relatively important in the East South Central and South Atlantic States. Fatal accidents occasioned by animals, on the other hand, ranked highest in the Mountain States followed by the South Atlantic and the South Central groups of States.

#### **More Accidents Among Older**

Further analysis of these vital statistics also indicates that for the United

States as a whole more fatal work injuries to farm people occurred in the age group 60-69 than in any other 10-year group. The next in order was the age group 50-59. Five of the geographic divisions, namely, the New England, Middle Atlantic, East North Central, West North Central, and South Atlantic, had the greatest number of farm work fatalities in the age group 60-69, while the East South Central, West South Central, Mountain, and Pacific divisions had the greatest number in the age group 50-59.

In general the actual number of work fatalities increased with the advancing age groups, but unfortunately no information is available on the age distribution of farm workers for the years covered by the data. Hence the accident frequency per 1,000 for different age groups cannot be determined. Many younger men were serving in the armed forces or in war industries during part of this period and older men, aided to some extent by inexperienced boys and girls, were endeavoring to carry on the farm work. This has been even more generally true since 1943, and the presence of young and inexperienced farm workers many of them from the cities, has further emphasized the need for farm safety measures.

The present labor situation on our farms, coupled with the need for maximum production, gives to the coming National Farm Safety Week a special timeliness and importance. All agencies, public and private, should do everything possible to make it effective. Numerous causes of farm accidents can be completely removed by remedial measures. The danger from other causes can be greatly lessened by proper care and precaution. Awareness of danger and a desire and determination to play safe as far as circumstances permit can be promoted by a farm-safety campaign, and this is the purpose of National Farm Safety Week.

JOHN D. RUSH  
*Bureau of Agricultural Economics*



UNITED STATES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF AGRICULTURAL ECONOMICS  
WASHINGTON, 25, D. C.  

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# THE AGRICULTURAL SITUATION

AUGUST 1945

*A Brief Summary of Economic Conditions*

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WITH total civilian, military and export demand for American food about one-half greater than the 1935-39 prewar average while 1945 food production is now expected to be only one-third above prewar, the basic food problem in the months ahead is one of achieving an equitable distribution of an increased output to meet an even greater demand. \* \* \* Despite the most critical transportation situation of the war, especially in the West, the importance of food and other farm products means that the marketing of agricultural commodities will receive top consideration in the use of available transportation facilities. \* \* \* Realized net income of farm operators from agriculture in 1944 was 11.9 billion dollars, without Government payments, only a 0.2-billion dollar increase over 1943 compared with a 3-billion dollar increase in each of the two previous years. \* \* \* The final 1946 wheat goal of 68.9 million acres and the rye goal of 2.6 million acres, about the same as the planted acreage this season, point to a continuation of the present high level of agricultural production in 1946. \* \* \* Prices received and prices paid by farmers were both at the highest July levels since the period just after World War I.

# FACTS ON FOOD ARE ESSENTIAL

## *Secretary's Message to Crop Reporters*

**T**HIS may be the most critical food year of the war. Civilian shortages of meat, butter, sugar, and certain other foods in this country, together with increased military and foreign relief needs since victory in Europe, make American food production more important than ever before. And just as important are the facts on the production of food—so essential to its most effective use.

Farmers, merchants, warehousemen, processors, and others connected with the production, processing, and distribution of food and other farm products are doing a magnificent job despite critical shortages of manpower, machinery, and materials. And among these patriotic Americans who are performing such miracles of production are the thousands of men and women who are rendering a very important additional service.

They are the volunteer crop, livestock, and price reporters who regularly make available facts on production and prices in their areas. Without these essential facts the programs for producing food, feed, fiber, and oil crops could not be successfully planned and carried out.

As your new Secretary of Agriculture, I take this opportunity to greet you crop reporters. This year we need more information earlier than ever before. We have transportation problems that cannot be met unless we know when and where farm produce will pile up. You, as crop reporters, are on the firing line today as the country searches for every crumb of food with which to care for our needs. You have your greatest chance to help in the war effort. Good luck to you.

CLINTON P. ANDERSON  
*Secretary of Agriculture*

## Commodity Reviews

### FOOD PRODUCTION

**T**OTAL civilian, military, and export demand for American food is now one-half greater than the over-all demand during 1935-39, while aggregate food production in 1945 will be about one-third greater than before the war, though about 4 percent below 1944. Thus the basic food problem in

1945 is one of achieving the most equitable distribution of an increased output to meet an even greater demand.

Food from livestock production for this year may be about 5 percent less than last year though 34 percent above 1935-39. Output of livestock products will be lower in the second half of 1945 than it was in the first half, and

present prospects do not point to much improvement in the first half of 1946. On the basis of July 1 conditions, food from crop production this year will be slightly less than it was last year, but about 28 percent above prewar, 1935-39.

Prospective food supplies for civilians in 1945 indicate civilian per capita food consumption will be 5 percent below the all-time record of last year, but 5 percent above the 1935-39 average. Distribution of total civilian supplies will be quite different from that of the prewar period when many people were financially unable to buy some foods they wanted which meant that those with higher incomes usually had a wide selection. Now, higher war incomes mean the selection, which is limited by war takings, is being divided among a great many more people. In addition, available supplies tend to stay close to the areas where produced as long as the demand con-

tinues strong in those areas. Thus supplies for many urban areas are reduced disproportionately.

Even though the selection may not be as wide as last year or before the war—for some people—over-all civilian food consumption in the months ahead will continue well above the prewar level of nutrition. Supplies of most grain products, fluid milk, skim milk products, canned fruit juices, many fresh vegetables and fruits, and fresh fish will be fairly plentiful. Of course, certain foods will continue short of the extremely high level of demand. Some of these are: Meats, fats and oils, sugar, cheese, condensed and evaporated milk, poultry, eggs, and canned fruits and vegetables. In addition, rice, dry beans, apples, and some processed foods using large amounts of sugar or fats and oils may become short of the high demand.

Total supplies of sugar and eggs will be smaller in the second half of 1945 than in the first half, but civilians are expected to get more eggs next year. The large quantities of rice and of canned fish, fruits and vegetables needed by the armed forces in the Pacific will reduce civilian takings, this fall and winter, below a year earlier.

Present estimates of the distribution of the total food supply in 1945 shape up about as follows: 77 percent to United States civilians compared with 80 percent in 1944, 17 percent to the armed forces including relief feeding by the military compared with 13 percent last year, and 6 percent for lend-lease and other exports compared with 7 percent last year.

## SUGAR

**D**OMESTIC sugar production this year is now expected to be nearly one-half million tons larger than last year, totaling perhaps 1.9 million short tons (raw basis). Sugar-beet production is indicated to be nearly one-third above 1944, but 7½ percent

Food Production, 1944 and 1945

Food group or item	1944	Preliminary 1945 <sup>1</sup>	1945 as percent of 1944
	Million pounds	Million pounds	Percent
Red meat (dressed weight).....	24, 648	22, 700	92
Turkey and chicken meat (dressed weight).....	4, 007	3, 900	97
Eggs <sup>2</sup> .....	5, 305	4, 885	92
Total milk production on farms.....	118, 504	121, 000	102
Fluid milk and cream.....	56, 144	57, 449	102
Cheese.....	1, 009	1, 100	109
Butter.....	1, 816	1, 740	96
Lard.....	2, 951	2, 140	73
Margarine.....	470	504	105
Shortening and other edible fats and oils.....	2, 487	2, 407	97
Fresh fruit.....	19, 329	17, 745	92
Processed fruit <sup>3</sup> .....	10, 851	10, 970	101
Potatoes.....	366	405	105
Sweetpotatoes.....	72	84	89
Dry beans.....	1, 502	1, 400	93
Fresh vegetables.....	34, 224	34, 466	101
Processed vegetables <sup>4</sup> .....	11, 136	11, 235	101
Wheat <sup>5</sup> .....	1, 079	1, 129	105
Rice <sup>5</sup> .....	70	75	107

<sup>1</sup> Preliminary estimate based on July crop report, latest livestock reports, and other recent information.

<sup>2</sup> Million dozen.

<sup>3</sup> Fresh weight equivalent.

<sup>4</sup> Dehydrated vegetables not included.

<sup>5</sup> Million bushels.

NOTE.—All figures are production estimates, not civilian supply estimates.

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1935-39 average.....	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	150	106
1943.....	162	162	119
1944.....	195	170	115
1941			
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	191	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116
March.....	193	173	114
April.....	203	173	117
May.....	200	173	116
June.....	206	173	119
July.....	206	173	119

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

below the 1934-43 average. On the other hand, production of sugarcane in Louisiana and Florida is expected to be only 11 percent above last year, though 21 percent above the 10-year average. Prospective 1945 yields of both cane and beets are well above average and acreages are larger than in 1944.

In spite of prospective increases in mainland production this year, the supply of sugar available to civilians will remain very short for the remainder of 1945. Only a small proportion of the 1945 crop will reach consumers before 1946. But, despite a considerably smaller quantity of sugar available for consumption in all of 1945, the rate of use in the first half of this year was slightly higher than in the first half of 1944. Consequently, the total decrease in consumption for the year must all come in the July-December period. This is especially difficult because civilian sugar consumption normally is about 10 percent larger in the second half of the year than in the first half.

The shortage of sugar is the result of the complete loss of sugar supplies from the Philippine Islands and Java, greatly reduced production in Europe, and a small crop in Cuba in 1944-45. In prewar years the United States imported nearly 1 million tons of sugar annually from the Philippines. Java usually exported a little more than 1 million tons a year to various countries some of which came to this country but is now going elsewhere. Cuba produced only 3.9 million tons of sugar in 1945 compared with 5.6 million tons in 1944. Furthermore, 900,000 tons of the 1944 output were used to make invert molasses for producing badly needed industrial alcohol for war purposes.

World sugar stocks have been reduced to a low level. It will probably be several years before important producing areas such as Europe, Philippine Islands, and Java recover sufficiently from the effects of war to regain something like their prewar output. Until that time, sugar is likely to remain in short supply in the United States.

## FATS AND OILS

THE OIL equivalent of the total 1945 planted acreage in cotton, soybeans, flaxseed, and peanuts—assuming average yields per acre—is now expected to be the same as in 1944.

This year's oilseed planted acreage of nearly 40 million acres is about 1 million acres below 1944. But, in oil equivalent, the 2 million acre reduction in cotton plus slight reductions in soybean and peanut acreage are offset by the 1-million-acre increase in flaxseed.

Cotton acreage in cultivation on July 1 was estimated at 13.4 million acres compared with 20.4 million a year earlier. Peanuts grown alone for all purposes at 3.9 million acres and soybeans grown alone for all pur-

poses at 13.3 million acres are both about the same as the 1944 planted acreage. This year's planted flaxseed acreage, however, is 4.1 acres compared with 3.1 million in 1944. Such a flaxseed acreage is expected to produce 32.7 million bushels, nearly a third more than the 23.5-million-bushel output in 1944.

Ceiling and support prices for cottonseed, peanuts, and soybeans produced this year will be about the same as last year. In the case of flaxseed, despite no change in other terminal markets, the ceiling prices in California terminal markets have been increased 5 cents a bushel, to \$3.35. Minneapolis ceiling price continues at \$3.10 per bushel. Thus farmers in the main producing areas will receive about the same price as last year for comparable grades.

However, all farmers who fulfilled their individual flaxseed acreage goals will receive \$5 for each acre planted up to the goal—a bonus not in effect last year.

## TOBACCO

WITH prospective yields higher than for most years prior to 1944, favorable weather during the remainder of the growing season might result in a flue-cured and burley tobacco crop, the major cigarette types, considerably in excess of the July expectations of 1.64 billion pounds, about the same as last year, and 47 percent above the 10-year (1934-43) average.

Disappearance of leaf tobacco during the past 12 months was the largest in history, and, despite the large 1944 crop, stocks of most types are a little smaller now than a year ago. A slight decrease in stocks is indicated for flue-cured, dark, and cigar tobacco, but substantially larger holdings of burley are expected. The over-all supply of leaf appears adequate to maintain the present level of utilization without any substantial decrease in stocks a year hence. But, in relation to usage, manufacturers are probably holding smaller stocks of properly aged to-

### Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		July 15, 1944	June 15, 1945	July 15, 1945	Parity price July 15, 1945
	August 1940- July 1944	January 1935- December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.39	1.50	1.46	1.53
Rice (bushel).....do.....	.813	.743	1.73	1.76	1.76	1.41
Corn (bushel).....do.....	.642	.691	1.17	1.11	1.12	1.11
Oats (bushel).....do.....	.399	.340	.764	.674	.659	.690
Hay (ton).....do.....	11.87	8.87	13.90	15.90	15.40	20.50
Cotton (pound).....cents.....	13.4	10.34	20.32	20.90	21.25	21.45
Soybeans (bushel).....dollars..	1.06	.954	1.81	2.17	2.16	1.66
Peanuts (pound).....cents.....	4.8	3.55	7.75	8.23	8.18	8.30
Potatoes (bushel).....dollars..	.697	7.17	1.89	1.80	1.83	1.23
Apples (bushel).....do.....	.96	.90	2.63	2.71	2.65	1.66
Oranges on tree, per box.....do..	1.81	1.11	2.94	2.95	2.90	2.03
Hogs (hundredweight).....do.....	7.27	5.33	12.70	14.10	14.00	12.60
Beef cattle (hundredweight).....do..	5.42	6.65	10.90	12.90	12.80	9.38
Veal calves (hundredweight).....do..	6.75	7.80	12.70	13.80	13.90	11.70
Lambs (hundredweight).....do.....	5.53	7.79	12.60	13.40	13.50	10.20
Butterfat (pound).....cents.....	26.3	29.1	50.2	50.2	50.2	42.5
Milk, wholesale (100-pound).....dollars..	1.60	1.81	3.11	3.04	3.09	2.58
Chickens (pound).....cents.....	11.4	14.9	24.2	27.5	28.5	19.7
Eggs (dozen).....do.....	21.5	21.7	31.2	35.8	37.9	35.0
Wool (pounds).....do.....	18.3	23.8	42.9	41.7	41.4	31.7

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices

<sup>6</sup> Adjusted for seasonality.

tobacco now than at any time in recent years.

Over-all consumption of tobacco products, including the military overseas, is continuing at or near the wartime peak. Although Government purchases of cigarettes have been reduced since VE-day, domestic consumption is still restricted by inadequate supplies. Cigarette consumption is expected to continue at a high level during the next year or so. But manufacturers still face major problems in increasing production, and may continue to do so until after the end of the war.

While domestic consumption of cigars has increased only slightly in recent months, there have been substantial increases over a year earlier in chewing tobacco, smoking tobacco, and snuff.

Exports of tobacco from this country have increased substantially in recent months, mainly because of improved shipping. Some tobacco bought in former years and held in storage in this country is being shipped abroad. About 400 million pounds of this year's flue-cured crop have been ear-marked for export, largely to British Empire countries for military use under lend-lease as well as for sale to foreign governments for civilian consumption. Exports during the years immediately following the war may depend largely on foreign trade policies of importing nations together with credit arrangements in effect then.

## LIVESTOCK AND FEED

**T**OTAL number of livestock on farms at the end of 1945, in terms of grain-consuming animal units, probably will not differ greatly from a year earlier. Total cattle numbers are likely to be little changed, while sheep, horse, and mule numbers will be reduced. But hog and chicken numbers probably will be slightly greater.

The quantity of feed concentrates

available for the 1945-46 feeding year, on the basis of July 1 indications, may be only 153 tons, 10 million tons less than in the current season.

The supply of feed grains per animal unit for the 1945-46 feeding year (beginning October) is indicated by July conditions to be 5 to 10 percent smaller than the relatively large supply for the 1944-45 feeding year. On the other hand, the hay supply per animal unit will be 5 to 10 percent larger than in 1944-45, and one of the largest on record. The over-all supply of by-product feeds is expected to be slightly smaller than in 1944-45 on the basis of July indications. High-pro-

### Feed Balance, 1938-45, Year Beginning October

Item	1938-42 average	1944 <sup>1</sup>	1945 <sup>1</sup>
Stocks, beginning crop year <sup>2</sup> .....	Mil. tons	Mil. tons	Mil. tons
	20.1	10.7	16.0
<b>SUPPLY</b>			
Feed grain production:			
Corn.....	75.0	90.4	75.2
Oats.....	18.6	18.7	22.7
Barley.....	7.9	6.8	6.1
Sorghum grains.....	2.4	5.1	3.8
Total production.....	103.9	121.0	107.8
Other grains and byproduct feeds for feed.....	23.0	30.1	-----
Total supply.....	127.0	151.1	111.6
<b>UTILIZATION</b>			
Feed grains and other grains fed.....	98.6	111.6	-----
Byproduct feeds fed.....	10.3	19.0	-----
Total concentrates fed.....	111.9	130.6	-----
Feed grains for food, seed, industry and export.....	12.0	15.4	-----
Total utilization.....	126.9	146.0	-----
Total utilization adjusted to crop-year basis.....	126.5	145.8	-----
Stocks, end of crop year <sup>2</sup> .....	20.5	16.0	-----
Number of grain-consuming animal units on the following January 1.....	Mil. 140.3	Mil. 147.0	Mil. 147.0
Supply of all concentrates per animal unit.....	Tons 1.05	Tons 1.10	1.04

<sup>1</sup> Preliminary—subject to change as more data become available.

<sup>2</sup> Stocks of corn Oct. 1, oats July 1, barley June 1, sorghum stocks, not reported. Includes stocks on farms, at terminal markets, and in CCC bins.

tein feed supplies are expected to be smaller while wheat millfeeds supply may be slightly larger.

A large supply of hay for feeding during the next year promises a continuing high level of beef cattle production in 1945-46. Milk production is likely to continue large also, with a record or near-record number of milk cows in the country and high unit returns to dairy producers.

The reduced supply of feed grain in prospect for the 1945-46 season would allow virtually no expansion in the total production of grain-consuming animals in 1946. Livestock production at about present levels could be obtained, but in so doing stocks of feed grains would be reduced substantially by the time new-crop grain is harvested next year. Present indications are that egg, farm chicken, and turkey production may increase slightly in 1946.

Number of pigs raised will depend largely upon outturn of the corn crop. The 1945 fall pig crop probably will show an increase over a year earlier, but weights of hogs marketed from that crop will be lighter than the record weights of hogs now being marketed.

## COTTON

**D**ESPITE the lowering of the Government loan rate to 92½ percent of parity as compared with 95 percent of parity last year, the actual loan rate on Middling 1½<sup>16</sup>-inch cotton is fully as much as a year ago. Last season's loan rate was based on 95 percent of the parity price (21.08 cents per pound) at the beginning of the season. To this was added 105 points to convert this basic rate applied to Middling ¾-inch cotton, to the base rate for Middling 1½<sup>16</sup>-inch cotton. The consequent loan rate, therefore, for Middling 1½<sup>16</sup>-inch cotton at average location was 21.08 cents per pound, gross weight.

This year the loan rate is 92½ percent of the parity price at the beginning of the marketing season of 21.45 cents to which is added 125 points to convert to Middling 1½<sup>16</sup>-inch cotton. The base loan rate this season, therefore, for Middling 1½<sup>16</sup>-inch cotton at average location is 21.09 cents per pound.

Grade and staple premiums and discounts are those which prevailed in the open market in the early part of the season. This base loan rate for Middling 1½<sup>16</sup>-inch cotton compares with a Government purchase price in August of 22.15 cents a pound and a Government sales price of 23.12 cents a pound.

The production of cotton this season is currently estimated at 10,134,000 bales, 17 percent less than in 1944. The 1945 yield is estimated at 269.7 pounds per acre and the area in cultivation on July 1, less 10-year average abandonment, is slightly above 18 million acres, the smallest since 1885.

## FARM LABOR

**F**ARM labor supplies for harvest operations this fall are expected to be less than a year ago. In the first 7 months of 1945 the total number of workers on farms averaged 2 percent below last year. Family workers were 1 percent fewer than a year ago, but were doing a larger proportion of the work on farms, while the number of hired workers was down 6 percent despite increases in wage rates.

Cut-backs in production of munitions and other war industries together with discharges from the armed forces so far have had little effect on the farm labor shortage. The industrial labor market is showing slight effects of cut-backs in most areas. Reconversion, movement to other areas, and some withdrawals from the labor force appear to be reabsorbing



most displacements from war industries. It is reasonable to expect that some returning soldiers and some displaced workers will return to farms, but it does not seem likely that much help can be expected from these sources by fall.

Labor supplies for corn harvest in the Corn Belt are expected to be as tight or tighter than a year ago. Through June 30 this year family workers have numbered about the same as last year but hired workers have been 12 percent fewer in this area. However, corn production in the Corn Belt is expected to be below a year ago so that less labor may be required.

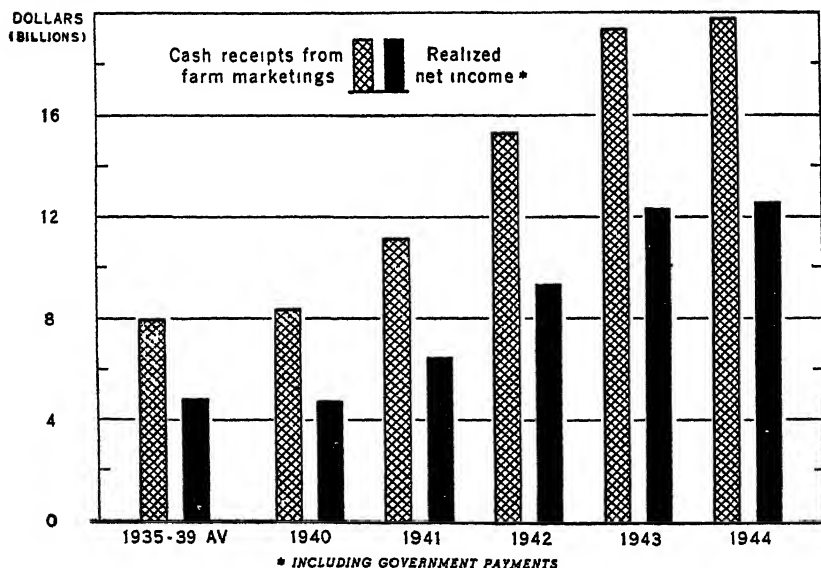
Though total farm employment in the Cotton Belt during the planting and chopping seasons was about 2 percent below a year ago, the supply of

harvest labor, relative to requirements, probably will be no tighter than a year ago because the cotton acreage is down about 10 percent from last year.

A drastic reduction in the commercial apple crop, in all areas except the West, should make it possible to complete the apple harvest with local labor in most areas. Production now in prospect is nearly two-thirds below a year ago in the Eastern States, one-half as large in the Central States but down only slightly in the Western States.

Foreign workers and war prisoners have been supplementing regular sources of farm labor in harvesting truck crops and work in sugar beets so far this season. It is expected that these sources will continue to supplement the domestic labor force for the remainder of the year.

#### INCOME OF FARM OPERATORS, 1935-39 AVERAGE AND 1940-44



# Farm Income During the War

**T**HE RATE of increase in farm income generally is leveling off compared with the rather rapid rise in the early war years. In 1944 cash receipts from farm marketings stood at 19.8 billion dollars, only 2 percent above 1943 and a decided reduction from the rate of increase of 25 percent from 1942 to 1943 and more than 33 percent in each of the two preceding years. Most of the increase in cash receipts over the 1935-39 prewar average of 8 billion dollars occurred during the 3 years, 1941-43.

Increases in realized net income of farm operators from agriculture during the past 4 years closely paralleled the changes in cash receipts. While net income stood at 11.9 billion dollars in 1944 (12.6 billion with Government payments) it was only 200 million dollars more than in 1943. Largely because of marked increases in expenses for livestock purchases, feed, fertilizer, net income in 1940 fell slightly under the 1935-39 prewar average—despite the rise in cash receipts. From 1941 through 1943 the rise in net income was at a slightly faster rate than cash receipts, but the two followed essentially the same pattern—in 1942 and again in 1943 cash receipts increased by about 4 billion dollars while net income rose by about 3 billion in each year. Then, last year saw approximately the same leveling off in the rise of both.

## Cash Receipts

All the major groups of crops and livestock products shared—though not equally—in the wartime rise in cash receipts. Among the crop groups, the largest percentage gains between 1935-39 and 1944 were registered by oil-bearing crops, with cash receipts five and one-half times the prewar average—a drop from an even higher level in 1943—and by fruits and feed grains, each with receipts about three times the prewar level. Hogs showed the largest percentage gain among the

livestock and livestock products groups, cash receipts in 1944 totaling about three and one-quarter times the prewar average. Poultry and eggs were next in percentage gains, but dairy products and cattle were responsible, after hogs, for the largest part of the gross increase in dollar volume of sales.

The wartime increase in cash receipts reflected a marked rise in prices of agricultural commodities in addition to a rapid expansion in production from relatively low 1935-39 levels. In 1944, prices of crops were double their prewar average, and prices of livestock and livestock products were up by two-thirds. The volume of farm marketing had increased about one-fourth for crops and nearly one-half for livestock and products.

The wartime increase in cash receipts resulting from higher prices and larger production has not, however, eliminated the wide disparity in farm incomes in different sections of the country. In 1944, for example, cash receipts averaged about \$3,600 per farm for the United States as a whole, but in four States the average was over \$7,500 and in nine States under \$2,000. Disparities within the States were even greater, varying from farms operating at a bare subsistence level to very large business enterprises.

## Realized Net Income

Realized net income of farm operators from agriculture represents the net return for their labor, including the unpaid labor of their families, and for their capital and management. Being a *net figure*, over and above operating expenses, it is more meaningful than cash receipts in measuring the income derived from the farm business available to the operator and family for current living and savings. As the table indicates, net income estimates are obtained by adding to cash

receipts from marketings the value of farm products consumed as food and fuel by the family and laborers on the farm, and the annual rental value of farm residences; and then subtracting from the resulting gross income the production expenses incurred in connection with farm operations. Government payments to farmers are shown as a separate component of net income, in order to distinguish the portion of farm income arising from this source.

Taking the period as a whole—1935-39 through 1944—realized net income increased to more than 2½ times its prewar level. The percentage rise was just about equal to that

in nonagricultural wages and salaries, but exceeded the rate of increase for the nonagricultural private business and professional groups (exclusive of corporations) whose net incomes just about doubled between 1935-39 and 1944.

### Crop and Livestock Inventories

A decline of 0.4 billion dollars in farm inventories during 1944, in contrast to an increase of 0.3 billion in 1943, more than offset the slight increase from 1943 to 1944 in realized net income. The inventory item as used here measures the value of the change between the beginning and end of the year in numbers of livestock on farms and in quantities of crops held for

Farm Operators: Cash Receipts, Production Expenses, and Realized Net Income, United States, 1935-39 Average and 1940-44

	1935-39 average	1940	1941	1942	1943	1944
	Bil. Dol.	Bil. Dol.	Bil. Dol.	Bil. Dol.	Bil. Dol.	Bil. Dol.
Cash receipts from farm marketings:						
Crops .....	3.4	3.5	4.7	6.3	8.0	8.6
Livestock and products .....	4.6	4.8	6.4	9.0	11.3	11.2
Total cash receipts .....	8.0	8.3	11.1	15.3	19.3	19.8
Nonmoney income (value of products consumed on farms and gross rental value of farm dwellings) .....	1.9	1.9	2.1	2.4	2.8	2.9
Gross income from agriculture .....	9.9	10.2	13.2	17.7	22.1	22.7
Production expenses:						
Feed purchased .....	.7	.8	1.1	1.5	2.1	2.1
Livestock purchased .....	.3	.5	.6	.7	.7	.6
Fertilizer and lime .....	.2	.3	.3	.4	.4	.5
Cost of operating motor vehicles .....	.5	.6	.6	.7	.8	.8
Miscellaneous .....	.8	.8	.9	1.1	1.2	1.2
Total current operating expenses .....	2.5	3.0	3.5	4.4	5.2	5.2
Hired labor:						
Cash wages .....	.7	.8	1.0	1.3	1.6	1.8
Value of perquisites .....	.2	.2	.2	.3	.3	.3
Total labor expenses .....	.9	1.0	1.2	1.6	1.9	2.1
Maintenance or depreciation .....	1.0	1.1	1.2	1.3	1.5	1.6
Property taxes .....	.4	.4	.5	.5	.5	.5
Farm mortgage interest <sup>1</sup> .....	.3	.3	.3	.3	.3	.3
Net rent to nonfarm landlords .....	.4	.4	.6	.9	1.0	1.1
Total expenses .....	5.5	6.2	7.3	9.0	10.4	10.8
Realized net income from agriculture .....	4.4	4.0	5.9	8.7	11.7	11.9
Government payments <sup>2</sup> .....	.4	.7	.5	.6	.6	.7
Realized net income from agriculture and Government payments .....	4.8	4.7	6.4	9.3	12.3	12.6
Value of change in farm inventories <sup>3</sup> .....	—	+1	+3	+8	+3	—4
Net cash available to farm operators after cash expenses <sup>4</sup> .....	2.9	2.8	4.1	7.3	10.1	10.1

<sup>1</sup> Farm mortgage interest declined from 345 million dollars in 1935-39 to 255 million dollars in 1944.

<sup>2</sup> Payments to farm operators; excludes amounts paid to landlords not living on farms.

<sup>3</sup> See text for explanation.

sale. It represents an adjustment for sales out of inventory, as in 1944, or for net additions to inventories from production during the year, as in 1943. The inventory decline for 1944 reflected a sharp drop in livestock numbers—inventories of hogs declining by half a billion dollars between January 1 and December 31—which more than offset an increase in crops stored for sale. The rise in inventories during 1942 and 1943 was due primarily to increases in numbers of cattle and hogs on farms.

### Farm Production Expenses

Farm production expenses just about doubled between 1935-39 and 1944, from a 5.6 billion-dollar prewar average to 10.8 billion dollars last year. This huge wartime rise was nevertheless smaller than the rate of increase in cash receipts from marketings, and explains why net income rose faster than cash receipts during the past 4 years.

The major items of production expense varied considerably during the war years, both in degree of change and in direction. For example, expenses for purchased feed and for net rent to nonfarm landlords<sup>1</sup> more than tripled between 1935-39 and 1944. Aggregate farm wages (cash wages plus the value of perquisites furnished to hired labor) more than doubled despite a decline of 13 percent in numbers of hired farm workers. Expenses for fertilizer and livestock purchases also were more than twice prewar levels. On the other hand, the cost of operating motor vehicles and depreciation charges on buildings and equipment were up by only two-thirds. Property taxes remained fairly stable. Farm mortgage interest was down by one-fourth because of a substantial reduction in the farm mortgage debt. Though most expense items showed successive increases each year, excep-

tions occurred in expenses for purchased feed which leveled off after 1943, livestock purchases which reached a peak in 1942, and farm mortgage interest which declined throughout the period.

Decided changes in the relative importance of the various expense items have taken place thus far during the war. For example, feed purchases accounted for less than one-eighth of total farm production expenses in 1935-39 compared with one-fifth in 1943-44, rent to nonfarm landlords increased from 6 to 10 percent of the total, whereas farm mortgage interest dropped from 6 to 2 percent.

### Net Cash After Expenses

Net cash available to farm operators represents their cash receipts minus their cash expenses. Cash expenses include the same list of items used in deriving net income, with two exceptions. First, the value of food, lodging, and other perquisites furnished to hired laborers is excluded from expenses since nonmoney income is not taken into account; second, the actual outlays of farmers for buildings and machinery are substituted for the depreciation item used in estimating net income.

Net cash available to farm operators totaled 10 billion dollars in 1943 and again in 1944, as compared with 7 billion in 1942, 4 billion in 1941, and 3 billion in 1940 and the prewar period. Beginning with 1942, this represented a more rapid increase than occurred in either cash receipts or net income. It reflected a sharp drop in purchases of farm machinery and equipment as well as in outlays for farm buildings in 1942 and 1943. In contrast, depreciation charges rose steadily during the war, exceeding the volume of cash outlays for machinery and buildings in 1942-44. Depreciation charges are estimated to approximate the amount that farmers would have to pay each year if they had replaced, at prices prevailing during the year, the amount of equip-

<sup>1</sup> Rent paid to landlords living on farms is not included in production expenses, because though it represents expense to one group of farmers it is income to another group.

ment used up in the year. An excess of purchases over depreciation charges, such as occurred during 1940 and 1941, represents a net addition to the farmer's wealth in the form of various types of farm machinery, whereas an excess of depreciation charges over purchases, as in 1942-44, indicates that farmers have used up a part of their capital invested in equipment.

Because of the durability of farm machinery and buildings and the wide

variation in outlay from year to year, depreciation is better than cash outlay as a measure of the cost of plant and equipment used up in any one year. Net cash available to farm operators is not *net income* because it includes cash outlay rather than depreciation, and because it takes no account of the products furnished for farm family living.

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## Transportation Most Critical of War

**K**EEPING the pipe line filled with supplies to the Pacific theater of war will test the capacities of the railroads, particularly the transcontinental lines, in coming months, as they have never been tried before. With western railroads carrying the major share of military traffic and with these same railroads called upon to handle the greater portion of the grain crops and livestock as well as the fruit and vegetable production of the West Coast, serious delays in moving these crops to markets will be experienced. The longer turn-around time between the loading of a car and its return for another load, because of the distances involved, will have the effect of further reducing the available car supply.

For the first time since the war began, the last year has seen the development of acute shortages of boxcars, particularly the high-class type of equipment required for grain, grain products, and many other types of foodstuffs. On January 1, 1943, the total serviceable boxcars on class I railroads was 735,104 cars. Although 18,783 new cars were delivered in 1944, this number had been reduced to 721,598 by January 1, 1945, and many of these cars were suitable only for rough freight. Shortages of manpower for repair and the rebuilding of cars has made it impossible for the car-

riers to keep their equipment in proper condition. The deterioration has progressed so far that it seems entirely probable that it cannot be remedied before the end of the war, when sufficient men are again available to work in railroad shops, and traffic has subsided to more normal levels that will permit the carriers to relieve cars from service for thorough reconditioning where they are now given only a patch-up job.

### No Grain-Boxcar Reserve

Prior to the war, it was the practice of the railroads to build a bank of empty boxcars in the West with which to move grain crops to market as rapidly as possible after harvesting commenced. Because of the unprecedented demands of military and other transportation needs, this is no longer possible.

At the present time, while the number of boxcars on western lines is actually somewhat larger than a year ago, they are busily at work moving old crop grain and the early harvested new crop from country elevators to terminal markets and hauling war freight to ports and military depots in the West instead of standing idle on sidings awaiting the rush of newly harvested grain.

Various expedients have been adopted to augment the supply of cars fit for grain loading. Full trains of

hopper-bottom gondola cars loaded with grain have shuttled from southwestern points to Gulf ports, and the use of gondola cars for short haul grain movements has spread generally throughout the central and eastern parts of the country. Some roads have slatted and lined livestock cars and rebuilt old refrigerator cars for grain loading. The total of these efforts is assisting tremendously in the grain movement, and while the 1945 harvest will not have the car banks of previous years, every effort is being made to handle the crop with the least possible delay.

Reporting machinery has been set up through the Bureau of Agricultural Economics and the Agricultural Adjustment Agency to spot the areas in need of particular attention so the railroads may arrange the distribution of their equipment accordingly. This information includes available storage facilities, production estimates, grain yet to be harvested, and grain on the ground on various dates. Certainly wheat will be stored on the ground, very likely in larger amounts in some States than was the case in previous years. Time will be required to get that grain safely under cover, but the measures being taken are expected to keep the period of exposure to a minimum. Much of the crop will have to remain in bin storage on farms for movement at a later date.

#### **Refrigerator-Car Shortage Acute**

A more serious problem lies in the transportation of fresh fruits and vegetables. Refrigerator cars have been wearing out faster than they could be replaced under our restricted car-building program. Railroad companies and private car lines, just before the outbreak of the war, owned a total of 146,319 freight refrigerator cars, some 25,000 less than a decade earlier. By April 1, 1945, the number of refrigerator cars had further declined to 138,410. Of these, the number laid up for repairs has increased substantially in the past year. As a result, there have been repeated and persistent

shortages of cars. These shortages have been aggravated on the Pacific coast by congestion in terminals and because the tonnage of loaded west-bound freight for military purposes has been so heavy that the movement of empty refrigerator cars to the coast area has been retarded.

These difficulties will probably continue until the war in the Pacific has been won and the return of troops and equipment to this country has been completed.

#### **Livestock Will Be Moved**

While the marketings of cattle are expected to be considerably heavier in the last half of 1945 than they were last year, the number of hogs to be moved will be less, and while the total volume of shipments will be greater than a year ago, it is not expected that there will be any shortage of livestock equipment, either rail or truck, to handle a normal pattern of movement to market. Some difficulty might be experienced if a heavy nonseasonal movement due to lack of feed caused by drought or some other calamity were to arise. The heavy freight and passenger burden on transcontinental railroads may have a tendency to slow the movement of range cattle and sheep to some extent, but the importance and scarcity of meat products assures that livestock will be moved to market.

Before the war, a large percentage of farm products, particularly fresh fruits and vegetables, poultry, dairy products, and livestock, moved by motor truck, but age and accumulated mileage have taken a heavy toll of this service. The peak of motor-truck transportation of agricultural products was reached in 1941. Since then, the total tonnage moved by all types of carriers has increased, but the percentage handled by trucks has declined and this decrease has had to be absorbed by the rails. Lack of tires, replacement parts, inadequate repair service, and conservation measures designed to lengthen the useful

life of trucks, tires, and parts have contributed to the loss of motor-vehicle tonnage.

Increased allocations of truck tires for civilian use recently announced by the War Production Board were made possible by the end of the war in Europe. However, this does not mean there will be plenty of truck tires from now on. In the first place, experience has shown that synthetic tires do not have the mileage of the prewar tire. Second, the increased allocations may be only temporary, at least partly so. Third, since July 1944, heavy duty tires have been rationed under a priority list, with only the most essential services, including the transportation of perishable foods, being protected by a high priority. Trucks engaged in hauling commodities or in services with lower ratings literally have had no new tires in the last year. Tires have been recapped again and again, but the supply of recappable carcasses has just about run out, and many thousands of trucks that have been transporting less essential, but nevertheless important, traffic eventually will have to have some relief.

The picture on farm trucks appears a little brighter, particularly for light and medium vehicles. More trucks in these categories are scheduled for production during the third and fourth quarters of 1945, and in addition surplus trucks will be available for sale in farm areas where needed.

Coastwise and intercoastal shipping was heretofore an exceedingly important part of the Nation's transportation system. But during the war, this type of shipping had to be discontinued, because of the tremendous need for ocean shipping for overseas movement and necessity for convoy due to the submarine menace.

Some think that it should be possible to release some of that shipping now, but, with much greater ocean distances now to be traveled, relief through the resumption of coastwise and intercoastal traffic is an impossibility at this time.

Lack of sufficient manpower to adequately operate the transportation facilities has been a major factor in the problem. Only recently the Army announced that 4,000 experienced railroad men would be furloughed to the railroads to help relieve the situation. And some further relief may come if a sufficient number of laid-off war workers heed the President's recent request to work for the railroads. The War Manpower Commission now gives railroad workers top priority for military deferment.

In spite of all the difficulties that lie ahead, the basic crops, except for some fruits and vegetables, will be moved to market although in some cases they may not be handled as promptly as might be desired.

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## Lumber for Farm Construction

FARM construction, one of the largest users of lumber, accounted for about 30 percent of total consumption a generation ago. It has dropped since then, but normally still takes about 16 percent and probably will continue to do so when peace comes.

Ninety-five percent of farm houses are lumber and the same percentage

would hold for other farm buildings if logs and poles are included. Lumber and other forms of wood construction have been low in cost, are easy to use, and have always been readily available in peace times.

Prior to World War II the only lumber shortage was during and immediately following World War I. That shortage was relieved after

peacetime readjustment in spite of the building boom which followed 1920.

### War Demands Different This Time

World War II has brought with it another wartime shortage, but there is no certainty this time that the shortage will disappear with reconversion. When heavy military demands of 1942 developed a shortage of other materials, lumber was looked to as an available substitute, but by 1945 the shortage of lumber became so acute it was rated one of the most critical materials. The last war required some 6 billion board feet of lumber, but this one has taken over 60 billion and is still taking lumber at the rate of 1½ billion board feet per month.

Because of military needs, farm construction, along with other civilian construction, is down to a depression low even though farm production has been maintained at all time peaks. Some critical situations, such as the inadequate grain storage capacity, are cause for strong complaints, but generally complaints are not as insistent after nearly 3 years of shortage as they were at the start. The explanation is not that farms do not need the lumber, but with labor shortage, and all the other difficulties in the way of doing construction, there is more disposition to wait. Fortunately much construc-

tion, both new and maintenance, can be deferred when conditions are unfavorable. That is one reason why the swings in construction are so extreme from bottoms to peaks of the construction cycles.

There was some expectation that a one-front war would mean more lumber for civilian uses, but this has not happened. Military requirements have not eased, and the public has been advised not to expect them to ease so long as war against Japan continues. At the same time production for the first 4 months of 1945 is 10 percent below the same period in 1944, which indicates a shorter 1945 supply. After 2 years of wartime restrictions, farmers know pretty well what the situation is as it affects them and they can assume that there will be no significant change in the lumber supply while the war continues.

### Long-Standing Construction Backlog

The longer the war continues, the more the deferred construction builds up. There was no appreciable build up during World War I, but deflation of agriculture after that war kept farm construction below normal for most of the 1920's. This was followed by the depression of the 1930's, with farm construction not reaching normal until 1939 and 1940. It has again been below normal since 1942. Expenditures for farm building mainte-

Estimates of Lumber Requirements—Prewar and Postwar

	Prewar			1945	Peace years			
	1923	1932	1940		First	Second	Third	Fourth
	Billion board feet	Billion board feet	Billion board feet	Billion board feet	Billion board feet	Billion board feet	Billion board feet	Billion board feet
Residential.....	10.8	2.1	8.6	1.4	3.5	7.0	9.5	10.5
Farm .....	6.2	2.2	5.5	2.2	3.7	5.4	6.4	6.7
Other construction.....	12.1	6.5	9.9	8.2	8.6	10.6	11.7	12.1
Total construction.....	29.1	10.8	24.0	11.8	15.8	23.0	27.6	29.3
Factory.....	4.4	1.7	3.0	3.5	3.7	3.9	4.0	4.1
Box crating.....	5.9	2.8	4.3	14.9	8.0	5.5	5.5	5.5
Total domestic.....	39.4	15.3	31.3	30.2	27.5	32.4	37.1	38.9



nance for the past two decades were about 1½ billion dollars below depreciation, making no allowance for improved building standards.

The rural electrification program has gone far toward bringing electricity to the farmer, but in other respects farm construction has not kept pace with modernizing of urban structures. The situation is usually emphasized by comparison of farm housing with urban housing as to sanitary facilities, equipment, state of repair, and overcrowding. Shelter for animals is equally in need of modernizing.

At the present time the agricultural balance sheet is the best it has ever been. Farm assets are valued at 90.8 billion dollars January 1, 1945, compared with about 53.8 billion dollars January 1, 1940. At the same time real estate mortgages actually dropped from 6.6 billion to 5.3 billion dollars. Particularly significant as related to postwar expenditures for farm improvements is a 16 billion dollar liquid reserve—war bonds, cash, bank deposits, and warehouse receipts.

#### **Postwar Outlook Better than Prewar**

Agriculture is faced with a downward readjustment from the current 24-billion-dollar level of gross income. However, if postwar farm income should hold at about 18 billion dollars which would be well above prewar, expenditures for farm construction and similar improvements should be in the neighborhood of a billion dollars a year. And this would be higher than the 20 years prior to World War II.

Industrial reconversion will be expedited as much as possible with the prospect that following reconversion the country will experience a period of prosperity as it did following previous wars. Such prosperity includes a boom in residential construction which like farm construction, is a large user of lumber.

No one can foretell what the situation will really be, either the magnitude of the construction boom or the

timing. The prospects, however, are for a boom comparable to that of the twenties. Without a break in recovery, such as that of 1921, it should require several years to reach the peak.

#### **Stocks Badly Depleted**

Lumber stocks have had to be drawn on heavily to meet wartime needs and total stocks of both producers and distributors dropped from 17.3 billion board feet on December 31, 1941, to 6.5 billion on December 31, 1944. These stocks will have to be built up during recovery in order to effectively meet peacetime demands. That is, postwar production will have to provide for stocks in addition to actual consumption. Currently, exports and imports are in approximate balance but with the tremendous reconstruction to be done in the war-torn countries exports would be expected to exceed imports and the difference would have to be met by excess of production over domestic consumption.

On this basis a production of 32.5 billion board feet might take care of the first peace year of domestic consumption, export 2 billion, and put 3 billion board feet back into stocks. Present production is down to about 30 billion board feet annually, primarily because of labor and equipment shortages. Production of 32.5 billion should not be difficult for the first peace year. However, with stocks as low as they are, particularly country yard stocks on which the farmer depends, there will probably be a tight lumber situation until distributors build up working stocks of dry lumber. That was true after the other war and the conditions would appear worse this time, but it is only a temporary difficulty.

The longer view is more uncertain. Should requirements build up to 40 billion board feet, possibly more, depending upon whether residential construction reaches the high levels frequently predicted, and whether exports are much in excess of prewar,

there is serious question of the industry's ability to produce that much lumber. It is very doubtful whether domestic lumber production will much exceed 32 or 33 billion board feet per year. War has made a heavy drain on the forests. Some large operators who have been overcutting to supply emergency needs should reduce their cut to a sustained yield basis. Some small operators who do not own timber and have been clean-cutting scattered small tracts may have difficulty after the war. Results of poor management of timber resources over these many years may hit harder than expected if the industry is asked to meet 40 billion board feet lumber requirements.

#### **Farmer—Consumer and Producer**

The farmer is on both sides of the problem. He is concerned about supply, because lumber is his best general-purpose construction material and is low in costs when adequate to meet demand. He is also responsible for his share of poor forest-land management in the past which may be the primary cause of a current tight lumber supply and higher prices. Approximately a third of the Nation's

forest-land acreage is held by farmers. A considerable part of lumber used on farms does come from farm timber, but the timber has been pretty much a gift of nature without the help of good woodland management, and represents less than half the timber crop the lands should be producing. Good management would more than double the financial return from most farm woodlands, and would also provide best assurance against high farm construction costs for the farms with woodlands.

How much shortage of lumber would curtail farm construction is difficult to say. There are other materials competing with lumber. But the ability of lumber to hold its own in the past is evidence that forced use of other materials would meet some resistance at least. And displacement of lumber by other materials in farm construction would represent displacement of a farm product by a nonfarm product at a time when recognition is being given to the need for farm crops with outlets other than as food and clothing.

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*Forest Service*

## Seasonality of Wartime Milk Production

Seasonal variation in milk production is a perpetual problem of the dairy industry. Late spring and early summer is the natural season of heavy milk flow. A concentration of freshenings in spring months centers the high point of the lactation curve of a sizable proportion of the milk cows, on May and June. Abundant green feed in pastures at this time further stimulates high output. And, too, low costs of producing milk from grass encourages a late spring and early summer production on those farms where dairying is only a sideline. The level of milk production at this flush season averages

about 1½ times that of the late fall and early winter months and in some areas is fully twice as much.

In contrast, seasonal variation in consumption of milk and dairy products is comparatively small. The wide gap between varying supply and uniform consumption is bridged in the marketing and distribution operations of the dairy industry. Through storage of manufactured dairy products, the bulk of the surplus supplies is carried over for winter consumption. The expense of this service, while normally borne largely by the consumer, tends to cause producer prices to be

lower in the surplus season and higher in times of deficit production, thus providing farmers an incentive to work toward more even seasonal distribution of supply.

### **War Brings New Influences**

Seasonal price variations have narrowed markedly under influence of uniform year around ceilings during the war, and the burden of carrying surplus supplies over to the deficit season has shifted largely into Government hands. On the other hand, seasonal differentials in Government incentive payments to producers for milk and butterfat have restored some seasonality into unit returns received by farmers. In appraising postwar marketing readjustments, it is important to know whether these factors have accentuated seasonal production changes, thus magnifying difficulties associated with this problem.

In order to gauge changes in seasonality, daily milk production in each month has been computed as a percentage of the average for the year. To eliminate trends caused by sizable year-to-year changes in level of production, each month has been compared with the 12-month period on which it centers. In 5 months of the year—April, May, June, July, and August—United States daily milk production is above average for the year as a whole. In May and June, the months of heaviest production, the daily rate is about one-fourth higher than the average for the year. In the 7-month period from September through March, milk production per day is below the annual rate, with the low point usually reached in November or December at a level approximately 15 percent below that of the year as a whole.

Milk marketing and supply problems come most frequently and are most acute at the peak and low points of the seasonal production curve. Large surpluses of milk during the flush season cause serious pricing problems especially in fluid markets where diversion of excess milk to

manufacturing outlets materially lowers prices to producers. During recent war years, a heavy volume in the flush season has also taxed facilities of many dairy plants. At the low point of the production curve, problems center on obtaining sufficient supplies to meet current consumption needs such as the fall of 1943 when an acute fluid milk shortage in the East almost caused a serious distribution break-down.

For comparisons of flush season and off season production with the year as a whole, a 2-month period appears to be the most appropriate time unit. Peak production is nearly always reached in June, but the relationship of that month to the remainder of the year may be materially influenced by the exact timing of the seasonal high point which usually comes in the early part of the month. Thus a low production in June often is accompanied by high production in May and a combination of the two is more representative of the general level of flush production than either one alone. At the other extreme of the seasonal curve, November and December usually have about equally low daily production, so, considered together, they cover the most critical deficit period.

### **Peaks Comparatively Stable**

The relationship of production in these high and low 2-month periods to that for the year as a whole during the past decade and a half are shown in the accompanying chart. From 1931 through 1934, peak season production was relatively lower and off season production relatively higher than in the past 10 years. From 1935 to date the relationship of May-June production to the year as a whole has been remarkably stable, with variations of only about 2 percent during the period, but has shaded slightly downward rather than upward during the war. The 2-month period of low production, on the other hand, has varied appreciably in relation to the yearly average. In the 1934-37 drought period, fluctuations were irregular with a sharp bulge

in 1936 when unusually heavy late fall production was preceded by a dry summer and followed by a winter of short feed supplies.

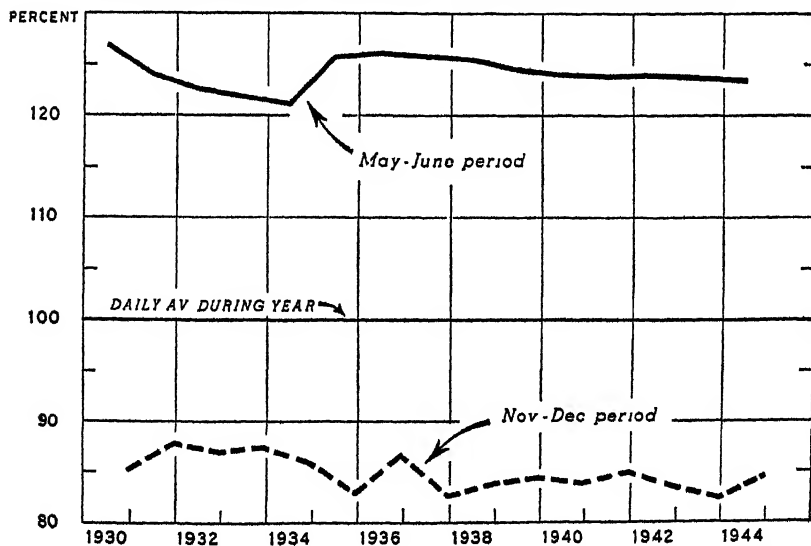
During the first 2 years of war, a trend toward light November-December production appeared to be developing. In 1943, failure of dairy product prices to rise as fast as feed prices, prospects of insufficient feed to provide for all livestock on farms, and a tightening of the farm labor supply during the harvest season, all exerted influences toward low late fall milk production. To counteract these unfavorable conditions, the Government launched a program of production incentive payments direct to farmers selling dairy products. Although begun in October 1943, the payments did not become firmly established on a year around basis until the early months of 1944. By the late fall of that year, milk production had recovered to the point where production in the November-December period showed about the same relationship to yearly production as in prewar years. The effect of the dairy payment pro-

gram became discernible rather gradually since farmers needed time to adjust their dairy operations to the new basis, and the full weight of the program on production apparently did not come until the late fall of 1944. Seasonal payment differentials established for that fall and winter season were also a favorable influence toward regaining normal production levels.

With the monthly pattern of milk production in 1944 holding closely to that of prewar years insofar as peak and deficit periods are concerned, such added problems of coordinating production and consumption seasonally in the postwar adjustment period seem likely to hinge on utilization of milk in different consumption channels. Considering current high levels of milk production and sharp wartime shifts in milk use, many areas will no doubt find the burdens of readjusting to a peacetime basis severe even though seasonality of production has not been appreciably increased during the past several years.

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MILK PRODUCTION: PEAK AND LOW PERIODS AS PERCENTAGE OF CENTERED YEARLY AVERAGE, UNITED STATES, 1930-44



# Surplus Medical Equipment for Rural Areas

**M**ANY farmers throughout the country are conscious of the need for improving rural medical and health facilities and services. They are not only thinking of improving the hospitals and health centers they already have or of building new ones where there are none, but also of finding better ways to pay the hospital and doctor bills.

Of the farmers interviewed in a recent study by the Bureau of Agricultural Economics more than four-fifths said they would like to see an increase of public clinics in rural areas after the war and three-fourths said they would like to subscribe to some flat rate prepayment plan for themselves and their families to cover the costs of doctors' and nurses' services as well as hospital bills.

## Improved Service at Less Cost

Farm people will have an opportunity to fulfill these desires to improve hospitals and health centers now in operation or to lower the cost of building new ones, if they take advantage of the surplus hospital and medical equipment that will be available in large quantities after the defeat of Japan. There will be plenty of most kinds available to rural communities at little cost, such as surgical instruments, bedding and beds, dishes, X-rays, incubators, diagnostic and sterilizing equipment, furniture, mobile medical and dental units, operating tables, and everything else hospitals and health centers use.

Consideration is being given to a scheme of packaging this surplus medical equipment as a means of simplifying buying for rural communities. A package for instance might consist of everything needed for the equipment of a health center to serve a community of 5,000 people. Another might include the essentials for a smaller community. Such "kits" might not only include surplus medical equipment and supplies, but also other

surplus materials and fixtures needed for the erection and furnishing of appropriate hospital or health center buildings. The prices or lease rates quoted would apply to the unit as a whole. Consideration is also being given to the needs of selling the equipment in small lots to health associations, co-ops, State, county, and city health departments.

In addition to community hospitals or health centers, other groups will find use for surplus medical supplies and equipment. State, county, and city health departments and schools that give periodic health examinations to school children or who may want to bring medical service to isolated farm areas might find good use for mobile medical and dental units. And small community services like fire and police departments, as well as other public offices which have a health function, could well use ambulances, oxygen tents, and water-purification devices.

## How to Obtain Equipment

What must a community, a hospital, or farm organization do if they want to get some of this equipment for a hospital or for their public health office, school, or fire department, or whatever local group or public agency that has need for it? If they already have a hospital or health center they should get a good idea of how much they will need and just how they are going to use the additional equipment. If they want it for their school system, or local agency like the public health office, or police department, they will still need to know how much and how they plan to use it.

Most country doctors cannot individually afford to get modern diagnostic equipment like X-rays and electrocardiographs. But small communities, by organizing now, will be able to obtain such equipment for the cooperative use of all the doctors of a community. Other communities may be looking forward to getting only the

simplest equipment, such as beds, examining tables, and good lights. And those communities without a health center, hospital, or even an emergency health room, might make plans to obtain this type of equipment after they have arranged for a place to use it. Until a better place could be found they might at least locate in any building or room with heat and hot water. The room could be open to any doctor in the community and could be used for emergency cases, children, and farm clinics. Any community desiring to work out this much of their plan should consult with their county or State health department and the doctors of the community whose support they will need and want.

First step for a community wishing to take advantage of surplus medical and hospital equipment is to request

its State Health Department to help it establish proof of need, determine the kind and amount of material needed, and establish an organization able to qualify as a purchaser under the Surplus Property Act.

All surplus medical and hospital material will be distributed to communities and groups on the basis of need. Under consideration now is a priority set-up for three classes of communities or groups, as follows: (1) those with no facilities at the present time, (2) those with inadequate facilities to meet present needs, and (3) those needing replacements to maintain or improve present services. The State Health Department would certify need and determine the priority of a given community or group.

GUS LARSON

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## Trends in Grape Production and Utilization

THE GRAPE is the second most important deciduous fruit crop, normally being exceeded only by commercial apples in total tonnage. And some years the grape crop is larger than apples. This year, for example, the apple crop is a record low, with prospects on July 1 indicating a grape production nearly two-thirds greater than commercial apples. The farm value of the grape crop last year was in excess of \$200,000,000, an all-time high and over four times the value in most prewar years.

Cultivation of grapes pre-dates the Pyramids, with wine making the first important use. Important in the development of grape culture was the fact that the fermentation of grape juice with added pre-servatives such as pitch, resins and spices made possible preservation and storage at a time when means of preservation were very limited.

Early American colonists tried to

grow European type grapes in the Atlantic States but were generally unsuccessful because this type did not withstand the cold temperatures in the North or disease and insects in the South. The Spaniards introduced European grapes to Mexico and the West, and were particularly successful in the coastal areas and interior valleys of California. The mission fathers did much to spread viticulture in California, with the first widespread use of grapes there for wine making.

When the Eastern colonists found that European grapes were not suited to their sections, they started selecting and cultivating native wild types. And a number of high quality varieties have been developed, with Concord the most outstanding. In each section of the country some of these varieties have been successful, and have provided grapes for the areas not suitable for growing European varieties; namely, all States except

the three Pacific Coast States and southern Arizona.

### Production Doubled

Total production capacity of the Nation's vineyards more than doubled from the turn of the century until the mid-1920's and production has continued at about 2½ million tons up to the present time. From the mid-20's until the late 30's prices for grapes and grape products were relatively low and not conducive to further expansion of acreage and production capacity remained about steady. During the war years (1942-44) prices received by growers have averaged about three times those of the 1925-39 period. Since 1924 the price received by producers varied from a low of \$13.40 per ton in 1932 to a high of \$79.70 in 1944.

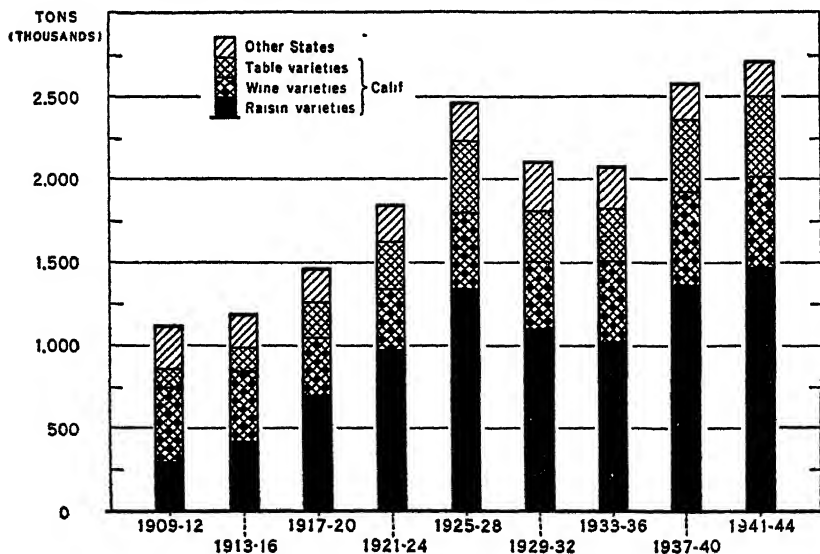
Grapes are grown successfully in every State in the country but the bulk of the commercial production comes from the Pacific Coast States, the Great Lake States of New York, Pennsylvania, Ohio and Michigan and from northwest Arkansas. Dur-

ing the early part of the century, California production averaged about 80 percent of the total crop. The proportion has increased and since 1940 the California crop has amounted to more than 90 percent of the total production.

The California acreage about doubled between 1919 and the mid-1920's, decreased about a fourth in the next 10 years, but increased slightly since. In 1945, California had 494,000 acres of vineyards in bearing. Between the early 1930's and the early 1940's per acre yields in California have increased about 50 percent. This is the result of abandonment of low yielding acreage in the 30's and better care, stimulated by more favorable prices the past few years.

Total production in the four Great Lakes States of New York, Pennsylvania, Ohio, and Michigan has averaged about 6 percent of the national output. Combined production capacity of these four States declined from 1909 to the end of World War I, then increased to the early thirties and is

GRAPE PRODUCTION, UNITED STATES, 4-YEAR AVERAGES, 1909-44



now about two-thirds the peak reached then.

Capacity in Washington, where both European and American types are important, has increased steadily since 1909. At that time production was less than a thousand tons but in 1944 was nearly 18,000 tons—a record for the State. Arkansas was relatively unimportant as a grape area until the mid-1920's when production increased as a result of a greatly expanded acreage for the commercial production of grape juice. Prior to 1924 production averaged only about 1,500 tons, but increased to an average of 12,000 tons from 1928-37 and has averaged 8,000 tons since 1938.

#### **Bulk of Crop Processed**

Grapes are utilized in the processed form more than most fruit crops. More than four-fifths of the 1944 production of 2.7 million tons was processed compared with about one-third of peaches and pears and a fourth of the commercial apple crop. Of the fruits less widely grown commercially about two-thirds of the 1944 cherry crop, a tenth of the plums, nearly nine-tenths of the prunes, and about four-fifths of the apricots were utilized as dried, canned, frozen, or in some other processed form.

Most of the grapes processed are grown in California, although important quantities of grapes produced in the Great Lakes States, Arkansas, and the State of Washington are used for juice, wine, and jelly. In these States increasing quantities of grapes have been processed during the past 10 years while the amount sold to consumers as fresh fruit has declined.

California, which produces about 95 percent of the United States grapes for processing, produces all the country's raisins and nearly nine-tenths of the grapes crushed for wine, brandy, and juice. Small quantities of grapes (14,000 tons in 1944) have been canned in California since about 1909. Practically all canned grapes are of the Thompson Seedless variety and are

used in mixes for canned fruit salad and fruit cocktail.

The raisin varieties, which have accounted for slightly more than one-half of California's total grape crop the past 20 years, are suitable for drying, crushing, and fresh table grapes. The table varieties, in most years about a fifth of the crop, have alternative uses as fresh grapes and as crushings for wine, brandy, and juice. The wine varieties, which included about two-fifths of the California production 27 years ago and about one-fifth in most recent years, are limited largely to crushing.

#### **More for Raisins than Wine**

In most years larger quantities of California grapes are dried than are crushed for wine, brandy, and juice, especially the last 3 years when Government programs increased the proportion of the crop made into raisins. Over half of California's total grape harvest was dried in 1943 and nearly half of the 1944 crop. Thompson Seedless, Muscats, and Sultanas, are principal raisin varieties. These varieties have been used extensively for both fresh consumption and crushing, as well as raisins. During the preprohibition period, prior to 1921, very few raisin grapes were used for either fresh consumption or crushing and the quantities crushed were not important until after repeal.

During the 11-year period (1909-19), prior to prohibition, California crushed an annual average of about 400,000 tons of all types of grapes for wine, brandy, and juice. During the 13 years of prohibition (1920-32) the average annual crush in California was only 85,000 tons and during the 12-year period since repeal the crush has averaged 766,000 tons. However, during the prohibition years larger quantities of grapes were shipped out of California and a considerable proportion of this tonnage was crushed in other States.

CARY D. PALMER and  
E. O. SCHLOTZHAUER

*Bureau of Agricultural Economics*



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of Industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	58	50	100	100	100	100	101	101	101	101
1915-19 average.....	72	90	153	151	150	143	154	163	158	158
1920-24 average.....	75	122	160	161	173	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	91	85	93
1935-39 average.....	100	100	119	125	128	118	119	109	119	117
1940-44 average.....	192	234	139	150	143	212	162	146	171	164
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	188	174	200	194
1944-July.....	231	320	152	176	170	328	194	165	197	190
August.....	232	324	152	176	170	-----	196	171	201	191
September.....	231	320	152	176	170	-----	198	179	200	191
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	318	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	234	322	153	179	172	324	202	199	203	202
February.....	236	320	154	179	172	-----	200	183	209	201
March.....	235	318	154	180	173	-----	198	175	211	200
April.....	230	310	154	180	173	335	194	176	215	201
May.....	226	299	155	180	173	-----	192	179	217	202
June.....	222	-----	155	180	173	340	191	189	216	203
July.....	-----	-----	-----	189	173	362	192	197	215	205

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>4</sup>
	Crops							All crops and livestock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops	
1910-14 average.....	100	101	102	96	98	99	-----	99	100
1915-19 average.....	193	164	187	168	187	125	-----	148	162
1920-24 average.....	147	126	192	189	149	144	* 113	160	171
1925-29 average.....	140	119	172	145	120	141	140	143	140
1930-34 average.....	70	76	119	74	72	94	106	86	90
1935-39 average.....	94	95	175	83	106	83	102	97	107
1940-44 average.....	123	119	245	131	159	133	172	143	154
1941.....	97	89	169	107	130	85	129	106	124
1942.....	120	111	252	149	172	114	163	142	150
1943.....	143	147	325	160	190	179	245	183	192
1944.....	165	166	354	164	209	215	212	194	195
1944-July.....	161	168	350	164	209	230	195	194	192
August.....	156	166	355	162	209	214	186	191	193
September.....	155	162	353	170	207	206	160	188	192
October.....	164	161	357	171	211	205	153	187	194
November.....	165	167	368	168	215	195	188	189	196
December.....	167	160	364	168	215	206	229	196	200
1945-January.....	169	163	365	163	214	205	262	200	201
February.....	169	164	360	161	215	211	223	197	199
March.....	171	166	359	163	215	211	203	196	198
April.....	172	162	362	163	215	221	269	204	203
May.....	172	161	363	165	216	227	193	198	200
June.....	173	162	364	169	217	237	269	210	208
July.....	169	161	364	171	221	237	244	207	208

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes. <sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

SEPTEMBER 1945

*A Brief Summary of Economic Conditions*

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**F**EEDING millions of people throughout the world during half a decade of war is an achievement of which American farmers can be justly proud. But though the war's end brings a deep feeling of relief, it also raises important questions in the minds of most farmers who have not forgotten the bitter fruits of victory of World War I. This time Congress has directed the Department of Agriculture to support prices of many farm products at 90 percent or more of parity for at least two years more. Even so, civilian demand for food and other agricultural products is expected to continue sufficiently high well into 1946 to maintain the prices of most farm products close to current levels, which are generally above support levels. Foreign shortages of food and clothing, especially in Europe, are likely to be more serious during the coming winter than at any time since the start of the war. Purchases of American farm products for foreign relief purposes will tend to increase as military takings decrease. \* \* \* Despite a slight downturn, the August index of prices received by farmers was only a trifle below the record level established in June and July of this year.

# Commodity Reviews

## DEMAND AND PRICE

**C**VILIAN demand for food and other agricultural products probably will continue sufficiently high well into 1946 to maintain the prices of most farm products close to current levels. Shortages of food and clothing, especially in Europe, are likely to be more serious during the coming winter than at any time since the start of the war. Purchases of farm products for foreign relief will tend to increase as military takings decrease.

The decline in the wage income of industrial workers which has been under way for several months, will be accelerated in the immediate months ahead. But total consumer incomes are not likely to be reduced enough to completely close the existing gap between civilian demand at current prices and available supplies of many farm products.

The downward trend in consumer incomes is largely due to the recent declines in industrial production, industrial employment, and wage income of industrial workers. Most of the decline in industrial production has been in durable manufactured goods, particularly machinery and transportation equipment. Offsetting this to a minor degree are slight increases in private construction and in production of equipment in the first half of 1945.

As a result of these trends, nonagricultural income leveled off in the second quarter of 1945 from the wartime peak reached in the first quarter of the year and will decline at a more rapid rate during the second half of the year as the production of war goods is drastically reduced.

The wage income of industrial workers declined about 3 percent per month during the spring and early summer, compared with an average of one-third of 1 percent during 1944. The decline in 1945 has all been in the earnings of factory workers, especially the group largely concentrated in

factories manufacturing durable goods. The decline in the wage income of industrial workers has been somewhat greater than the decline in the number of persons employed.

## NET FARM INCOME

**L**AST year's net income from agriculture of 11.9 billion dollars to farm operators was about the same as the 11.7 billion in 1943. Most States in the northern part of the country saw declines while increases were registered by the majority of the States in the South and West.

The greatest regional decrease was in the West North Central Region where net income dropped 11 percent. Reduced income from meat animals was mainly responsible for the decline of 5 percent in cash receipts for the region, while substantial gains in expenditures for fertilizer and lime, hired labor, and maintenance or depreciation accounted for most of the increase of 3 percent in expenses.

In Minnesota, where expenditures for many items exceeded 1944, net income dropped 17 percent, the largest decline in any State.

The greatest regional increase in net income was made by the South Atlantic Region with a gain of 20 percent. Pronounced increases in cash receipts from cotton, tobacco, peaches, and dairy products were largely responsible for the 15 percent gain in total cash receipts from farm marketings, while expenditures increased 4 percent.

Net income in South Carolina increased 43 percent, more than any other State. Cash receipts from cotton, tobacco, and peaches made decided increases and total cash receipts from farm marketings rose 30 percent. But because of increased outlays for hired labor and depreciation, production expenses rose 6 percent.

Although net income for the United States showed little change in 1944

# Income of Farm Operators, by States, 1943 and 1944

State	1943			1944		
	Cash receipts from farm marketings <sup>1</sup>	Production expenses <sup>2</sup>	Realized net income from agriculture <sup>3</sup>	Cash receipts from farm marketings <sup>1</sup>	Production expenses <sup>2</sup>	Realized net income from agriculture <sup>3</sup>
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
Maine.....	122,342	84,933	37,451	121,189	80,182	41,007
New Hampshire.....	43,758	34,814	18,797	43,668	35,006	18,662
Vermont.....	74,400	58,348	20,846	75,848	60,881	29,467
Massachusetts.....	146,843	117,017	47,985	144,375	116,235	47,212
Rhode Island.....	16,810	13,771	5,125	16,969	14,304	4,809
Connecticut.....	109,537	85,955	41,114	102,646	86,755	34,600
New England.....	513,798	394,878	200,318	504,694	403,363	187,393
New York.....	600,860	444,355	253,751	613,423	463,942	253,225
New Jersey.....	104,882	145,938	67,376	191,437	147,573	62,825
Pennsylvania.....	506,309	369,096	240,504	521,520	385,080	248,475
Middle Atlantic.....	1,301,051	969,389	561,601	1,326,380	996,545	561,525
Ohio.....	708,005	377,114	452,142	697,014	388,455	435,381
Indiana.....	601,794	342,190	401,623	656,542	366,204	375,232
Illinois.....	1,143,518	614,309	631,417	1,124,280	649,483	579,249
Michigan.....	473,704	249,103	308,466	493,350	258,459	320,606
Wisconsin.....	713,731	341,590	461,112	729,690	366,592	466,452
East North Central.....	3,700,782	1,927,615	2,267,990	3,701,785	2,029,193	2,166,920
Minnesota.....	883,367	392,468	565,225	798,528	411,217	484,277
Iowa.....	1,560,331	764,149	900,535	1,458,998	788,693	777,465
Missouri.....	682,792	333,248	402,977	635,558	345,902	400,758
North Dakota.....	407,521	198,859	230,574	400,865	211,621	228,434
South Dakota.....	356,042	183,299	199,713	337,212	193,368	170,430
Nebraska.....	659,663	337,467	322,065	620,204	332,115	286,706
Kansas.....	718,841	394,237	381,915	683,026	366,519	345,715
West North Central.....	5,204,550	2,653,707	3,095,008	5,001,481	2,729,405	2,753,794
Delaware.....	82,897	60,188	27,003	81,341	56,650	30,261
Maryland.....	159,470	115,014	72,127	158,009	110,434	70,833
Virginia.....	277,388	173,138	206,113	319,494	182,760	244,960
West Virginia.....	81,161	56,274	72,447	85,361	58,586	77,533
North Carolina.....	487,402	223,047	400,137	615,046	232,432	530,513
South Carolina.....	188,170	125,972	125,413	245,222	133,259	179,191
Georgia.....	335,001	167,392	270,749	380,475	175,106	319,126
Florida.....	322,744	156,379	189,170	337,757	165,382	195,212
South Atlantic.....	1,934,243	1,077,404	1,370,059	2,223,061	1,120,629	1,647,638
Kentucky.....	342,892	158,045	291,000	356,655	169,001	292,521
Tennessee.....	360,981	146,000	262,048	356,555	150,212	273,096
Alabama.....	242,810	124,995	221,384	262,366	128,129	243,995
Mississippi.....	332,394	141,615	282,090	300,265	147,583	308,583
East South Central.....	1,219,077	571,255	1,066,431	1,205,801	600,925	1,118,995
Arkansas.....	317,806	141,280	248,005	340,318	149,369	267,591
Louisiana.....	242,352	116,025	180,438	255,358	122,336	166,208
Oklahoma.....	389,141	208,164	240,813	438,700	218,899	288,150
Texas.....	1,201,687	610,968	758,021	1,222,596	645,006	742,021
West South Central.....	2,149,986	1,076,737	1,434,477	2,236,972	1,135,610	1,463,970
Montana.....	219,280	116,205	119,635	236,753	116,330	137,064
Idaho.....	226,367	115,858	128,107	236,687	122,746	131,610
Wyoming.....	91,049	40,001	40,206	91,562	50,771	47,961
Colorado.....	316,354	190,542	137,145	301,400	193,043	128,847
New Mexico.....	107,043	62,661	64,193	107,595	60,741	61,029
Arizona.....	130,604	73,808	63,760	123,541	72,381	58,301
Utah.....	103,075	50,596	61,997	115,735	55,212	68,750
Nevada.....	23,322	13,726	11,782	24,985	13,462	14,764
Mountain.....	1,217,184	681,397	626,815	1,238,258	686,286	648,315
Washington.....	413,134	233,307	218,717	453,056	252,552	241,816
Oregon.....	265,803	148,222	144,730	281,905	156,871	183,507
California.....	1,582,910	867,277	769,656	1,711,964	947,287	820,526
Pacific.....	2,201,046	1,248,806	1,133,103	2,447,015	1,356,000	1,215,849

<sup>1</sup> Includes estimated cash receipts from sales of day-old chicks.

<sup>2</sup> Includes estimated purchase expenses of day-old chicks.

<sup>3</sup> Excludes Government payments. Represents cash receipts, plus non-money income, minus production expenses.

NOTE: For more complete explanation of terms see *Farm Income Situation* for July 1945, issued by B.A.E.

## Index Numbers of Prices Received and Paid by Farmers

[1940-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1935-39 average....	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	150	106
1943.....	182	162	119
1944.....	195	170	115
1944			
August.....	193	170	114
September....	182	170	113
October.....	194	170	114
November....	198	171	115
December....	200	171	117
1945			
January.....	201	172	117
February....	199	173	116
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116
June.....	206	173	119
July.....	206	173	119
August.....	204	173	118

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

compared with 1943, cash receipts from wheat, cotton, tobacco, and fruit made substantial gains and total income from farm marketings increased slightly. This increase was offset, however, by greater expenditures.

## LIVESTOCK

**C**IVILIAN meat supplies this fall have become more plentiful than last summer as military purchases have been reduced and as marketings of all classes of meat animals have increased seasonally.

Meat purchases by the armed forces are expected to taper off rather sharply in the months ahead. Exports of meat probably will be materially less than in each of the years 1943-45 when shipments to lend-lease countries were large.

In 1944 noncivilian purchases of meat accounted for 23 percent of total meat production, estimated at 24.6 billion pounds (dressed meat basis). In 1945 the noncivilian share will be proportionally larger than in 1944, as total procurement for war uses is

indicated to be larger than in 1944 and production is indicated around 2 billion pounds smaller.

Despite a substantial reduction in army meat purchases for the remainder of 1945 and in 1946, meat supplies during the winter and spring at least are likely to fall below the demand at present meat prices.

Through the first half of 1946 prices of fed cattle, hogs, and lambs probably will be maintained at or near present levels. Prices of the lower grades of cattle probably will be a little lower in the first half of 1946 than in the same period of 1945 with an indicated large market supply and a material reduction in canned beef requirements of the army.

## DAIRY PRODUCTS

**T**HE end of the war has favorably affected prospective supplies of dairy products available for civilians for the next few months, especially canned and powdered milk as well as fluid cream. This will be made possible through reduced military purchases of dried and evaporated milk, and also the suspension of War Food Order limiting the sale of fluid milk and cream.

Prices received by farmers for the fall and winter months will probably not be much different than a year earlier. The gap between civilian demand and supply of dairy products for the past 2½ years has been very wide. A considerable reduction in either consumer purchasing power or noncivilian takings will be necessary before this gap is reduced. Retail prices of most dairy products are at 1942 levels, while consumer purchasing power at the present time is about a third above 1942. For the calendar year 1945 it appears that civilian consumers will absorb about 101 billion pounds of milk equivalent, compared with 110 billion pounds in 1942.

Unit returns, including dairy production payments, will be materially ahead of last years, at least through

March 1946, because of higher rates of payments on butterfat. Returns from dairying compared with other livestock enterprises or with feed prices will be favorable for continuation of a high production per cow.

Early in 1945 milk cow numbers probably reached an all-time peak for the next few years. The 1945 mid-year cow numbers showed a reduction of 2 percent from June of 1944.

## POULTRY AND EGGS

**P**RICES received by farmers for eggs after November are expected to decline much more than seasonally. Reduction in military requirements and an increase in the supply of red meats will materially effect the demand for shell eggs. Considerable weakening will probably occur in the demand for eggs, and prices received by farmers in the next few months will probably decline to support levels.

Egg production in the early part of 1946 will probably be at least equal to that in the early part of 1945.

Average prices received by farmers for chickens and turkeys will probably decline from the all-time peak reached during the summer of 1945. Such declines, however, are not expected to be very significant because the gap between demand and supply for chicken and turkey is very wide. Army procurement of both commodities is expected to be at a reduced rate.

## FEED

**F**AVORABLE growing conditions during July and early August materially improved the outlook for feed grain supplies for the 1945-46 feeding season. Supplies for the four principal feed grains—corn, oats, barley, and sorghum grains—may total about 130 million tons, only about 2 million tons less than the 1944-45 supply.

### Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		Aug. 15, 1944	July 15, 1945	Aug. 15, 1945	Parity price Aug. 15, 1945
	August 1909- July 1914	January 1935- December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.35	1.46	1.45	1.53
Rice (bushel).....do.....	.813	.742	<sup>1</sup> 1.70	1.76	1.64	1.41
Corn (bushel).....do.....	.642	.691	1.17	1.12	1.13	1.11
Oats (bushel).....do.....	.399	.340	.708	.659	.589	.600
Hay (ton).....do.....	11.87	8.87	14.30	15.40	14. <sup>ED</sup>	20.50
Cotton (pound).....cents..	12.4	10.34	20.15	21.25	21.3	21.45
Soybeans (bushel).....dollars..	3.96	.954	1.90	2.16	2.12	<sup>1</sup> 1.66
Peanuts (pound).....cents..	4.8	3.55	7.64	8.18	8.19	8.30
Potatoes (bushel).....dollars..	.697	7.17	<sup>1</sup> 1.57	1.83	1.67	1.25
Apples (bushel).....do.....	.96	.90	2.12	2.95	2.77	1.66
Oranges on tree, per box.....do.....	<sup>1</sup> 1.81	1.11	3.01	2.90	1.97	<sup>1</sup> 2.03
Hogs (hundredweight).....do.....	7.27	8.38	13.50	14.00	14.00	12.60
Beef cattle (hundredweight).....do.....	5.42	6.56	<sup>1</sup> 10.30	12.80	12.50	9.38
Veal calves (hundredweight).....do.....	6.75	7.80	<sup>1</sup> 12.40	13.90	13.80	11.70
Lambs (hundredweight).....do.....	5.88	7.79	<sup>1</sup> 12.20	13.50	13.00	10.20
Butterfat (pound) <sup>1</sup> .....cents..	26.3	29.1	50.2	50.2	50.3	<sup>1</sup> 43.3
Milk, wholesale (100-pound) <sup>1</sup> .....dollars..	1.60	1.81	<sup>1</sup> 3.19	3.09	3.14	<sup>1</sup> 2.71
Chickens (pound).....cents..	11.4	14.9	24.1	28.5	28.6	19.7
Eggs (dozen).....do.....	21.5	21.7	33.0	37.9	40.8	<sup>1</sup> 36.5
Wool (pound).....do.....	18.3	23.8	<sup>1</sup> 42.6	41.4	41.7	31.7

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under sec. 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

The prospective number of grain-consuming animal units expected to be on farms and ranches next January 1 may not differ greatly from a year earlier. Thus the 1945-46 supply of feed grains probably will be adequate to provide for about the same livestock production in total as in 1944-45 as well as for other indicated domestic requirements. Some reduction in carry-over of feed grains may occur, however, by the end of next season.

Commercial supplies of corn during the 1945-46 season will depend largely upon maturity of this year's crop. With a considerable part of the 1945 acreage planted late and if killing frosts are early this fall, a larger than average volume of corn will be of poor quality. Also, it is probable that a greater-than-usual proportion of the crop will be in forage and silage.

Total production of byproduct feeds for the 1945-46 feeding year probably will be about as large as in 1944-45, but production of high-protein feeds, particularly oilseed cake and meal, probably will not be quite so large. The most important reduction will be in cottonseed cake and meal. This will be offset to some extent by an increase in production of linseed cake and meal.

August 1 indications point to a 1945-46 supply of hay—production plus carry-over—of more than 116 million tons, only slightly less than the record in 1942-43. Thus the hay supply per animal unit probably will be one of the largest on record.

## FOOD GRAINS

**T**HE food-grain situation is highlighted by ample supplies of wheat for domestic and export requirements, with the supply for the year now indicated to be about 1,440 million bushels. This is considerably above the 982-million (1932-41) prewar average and is exceeded only by supplies in 1942 and 1943.

Heavy feeding and exports in recent months reduced the carry-over of old wheat on July 1 to about 281 million

bushels. But in August the crop was indicated at 1,146 million bushels, the largest on record. Imports are likely to be small, perhaps only about 15 million bushels.

Disappearance of wheat for civilian and military food is expected to be about 530 million bushels, for seed 81 million, and for exports about 250 million. In 1944-45 about 85 million bushels were used for alcohol and 116 for feed on farms where grown. If the total for these two items is about the same in 1945-46, and if the carry-over is not reduced below 250 million bushels, about 125 million bushels would be left for purchase as feed, or for increases in other items.

The likely disappearance of rye in 1945-46 is again expected to exceed the crop and result in a reduction in the carry-over by July 1, 1946. Stocks on July 1, 1945, were estimated at 12.8 million bushels, which is the lowest since 1938. Increased use of rye for industrial alcohol and for use as feed in the past 2 years reduced the carry-over from a record high on July 1, 1943, of 47.1 million bushels. On the basis of the August 1 report, the 1945 crop was indicated at 27.9 million bushels. Imports of rye are expected to be somewhat larger than the 1.7 million bushels in 1944. These figures indicate a total supply of about 43 million bushels. Food use is expected to be about 8.3 million bushels, down slightly from 1944-45. Very little will be available for alcohol. Feed use is not expected to be as large as the 20 million estimated for 1944-45, but exports will exceed the 3.2 million bushels in 1944-45.

The August crop report indicated a record rice crop of 76.1 million bushels, but the hurricane damage in late August will reduce these prospects considerably. Because the prospective demands for military and civilian food in the Orient are so great civilian consumption may fall below the 1935-39 average of 5.7 pounds per capita if any substantial proportion of this military and export demand is met.

## FRUIT

**B**ECAUSE of a short apple crop the 1945 deciduous fruit crop this year is about one-eighth smaller than last year. Supplies of apples will be short this fall and winter, but those of pears, grapes, and prunes are expected to be generally ample. Supplies of cranberries this fall are expected to be much larger than the very short supplies a year ago. Although the condition of the new 1945-46 citrus crop is not quite as favorable as a year ago, supplies are expected to be ample this fall and winter.

Decreasing military and other non-civilian requirements for fresh and processed fruits, because of the end of the war, mean larger quantities will become available to civilians. Although fresh and dried fruits and canned fruit juices generally will be adequate, some canned fruits are likely to continue short this season. However, increased imports of bananas and canned pineapple juice will add to the domestic fruit supply.

Fresh deciduous fruits generally have been at ceiling levels thus far this season, but prices for citrus fruits receded from ceilings this summer. Except for apples, prices for fruits this fall may not be quite as high as a year earlier.

## TRUCK CROPS

**D**ESPITE unfavorable mid-summer growing weather in most of the Atlantic Seaboard States, production of fresh market truck crops in September is expected to be as large as a year earlier. Even so, prices received by farmers for fresh market truck crops early this fall are expected to remain generally above prices received a year earlier.

Early fall production may be 48 percent greater than the corresponding period last year for domestic type cabbage (including some used for sauerkraut), 6 percent less for celery, and 13 percent more for tomatoes.

Prospects this year compared to last year for production of truck crops for processing are for record-large crops of green peas and mint for oil, near-record large crops of snap beans and sweet corn, and nearly as large a crop of tomatoes. Total acreage planted this year to all truck crops for processing apparently will exceed that planted last year and may set a new record high.

Prices to growers for the four major processing vegetables (tomatoes, sweet corn, snap beans, and green peas), are being supported again this year at levels approximately the same as last year.

Due to considerable cut-backs in military requirements it is expected that civilian supplies of 1945 pack canned vegetables will be generally adequate to meet unrationed civilian demand in the 1945-46 pack year.

## POTATOES

**B**ECAUSE of military cut-backs and considerable improvement in production prospects, ample supplies of potatoes for civilians appear probable this coming fall and winter. Total production in 1945 is estimated at some 420 million bushels, nearly 41 million larger than last year's above-average crop. Most of the increase in production is the result of shifts in acreage toward the commercial areas with high yields per acre. This year's crop is expected to return a lower price per bushel to farmers than did the 1944 crop, but demand for potatoes at the lower prices is expected to be well sustained even in the face of considerable unemployment because of the support price at 90 percent of parity.

The prospective crop of sweetpotatoes at 67.1 million bushels is only a trifle larger than average and about 4.5 million bushels smaller than last year's crop. Because ceiling prices for the 1945 crop have been set higher than those for last year farmers will receive a somewhat higher average price per bushel for the 1945 crop of sweetpotatoes than for the 1944 crop.



## TOBACCO

**T**HE 1945 tobacco crop may be the largest ever produced, exceeding last year's record production of 1,950 million pounds. The expected increase this year over last is attributable to a larger acreage of flue-cured even though over-all yields per acre are below 1944. Another large planting is likely in 1946 because prices have been favorable this year and last, and the 1946 allotments will be at least as large as 1945.

Stocks of all major types of tobacco except burley and dark air-cured are about the same as or slightly lower than a year ago. Burley stocks are substantially larger than last year, despite a record level of disappearance. The large carry-over and the record 1945 crop will result in a further increase in the supply of burley. In relation to disappearance, stocks of all other types of tobacco are below normal. The large 1945 crop of

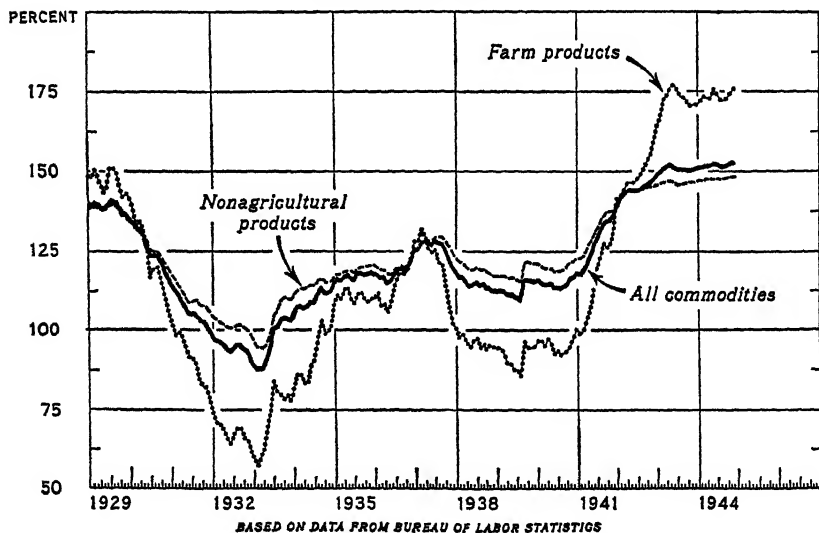
flue-cured will result in a slight increase in the 1945-46 season supply. The supply of dark air-cured will be larger next season, but the supply of cigar leaf will be considerably below both 1943-44 and 1944-45.

Demand for flue-cured tobacco, the only type now being sold by farmers, is strong again this season, and prices of most grades are above those of a year ago. It is possible under this year's price ceilings that this season's average price will be about 1 cent per pound above last year's average of 42.4 cents per pound. The highest average price ever received by flue-cured growers was 44.4 cents in 1919.

The over-all production of tobacco products is continuing at or near peak levels. Government procurement has declined since the end of the war. Domestic supplies of cigarettes are now substantially larger, and appear adequate to meet demand. But shortages are continuing in the lower priced classes of cigars.

## WHOLESALE PRICES OF FARM AND NONAGRICULTURAL PRODUCTS AND OF ALL COMMODITIES, UNITED STATES, 1929-45

INDEX NUMBERS (1910-14=100)



# War Changes in European Food Production

CONTINENTAL Europe, excluding Russia, is normally a net importer of food; yet, their civilian populations and huge armies were fed through several years of war, without significant imports from the outside world. To do this necessitated radical reductions in the production of livestock products and the utilization of a much larger proportion of the crop production as food. But food production (in terms of calories) declined and the nutritive value was materially lowered. Even though the war has ended, changes in food production provide a basis for appraising the food needs of Europe during the reconstruction period.<sup>1</sup>

## Data Often Inadequate

Measurement of wartime changes in Europe's food production is handicapped by several factors. In the belligerent countries statistics on production were confidential and any published estimates were often purposely biased by officials. During the war, dates and methods of collecting information on production were changed in several countries. Moreover, there was a tendency on the part of the officials in the occupied countries to under-report agricultural production in order to reduce the quantity of products which they were required to deliver to the Germans. Farmers in many countries were required to deliver all of their production to Government collecting agencies at fixed prices, except that needed for consumption on the farm or for livestock, feed, and seed. Consequently, where farmers under-reported the production they had, additional amounts were sold to black markets at greatly increased prices. All of these factors made it necessary to piece together information from several

sources in an effort to estimate food production and utilization. In addition to these factors, the marked shifts which necessarily had to be made in farm practices because of the shortage of feeds, fertilizers, labor, and equipment needed in production, make the preparation of reliable estimates of food production extremely difficult. However, the estimates used here are believed to be reliable enough to verify the general conclusions drawn from them.

Before the war, continental European countries, excluding Russia, produced about 90 percent of their food supply. Each year they imported on the average about 125 million bushels of cereals for food, 600,000 tons of sugar, 1,800,000 tons of edible fats and oils and some fruits and vegetables. Imports of feed grains amounted to about 5.5 million tons annually, oil cake and equivalent of oil seeds about 4.5 million tons, and about 1 million tons of bran were obtained from imported feed grains. These imported feeds, in terms of food produced, equalled about 1.5 million tons of meat and cheese, of which a part was re-exported, and about 800,000 tons of edible fats. Because production of meats, eggs, and cheese, for the area as a whole, was slightly in excess of consumption, the combined net exports of these products totaled about 200,000 to 300,000 tons.

## Methods Varied Widely

A considerable variation existed in the extent to which each country provided its own food supply before the war. In all of the eastern European countries from Estonia to Yugoslavia and Bulgaria, food production exceeded consumption. Denmark also was a net surplus producer of food, although large quantities of food and feed were imported. The Iberian Peninsula, before the Spanish Civil War, was practically self-sufficient in food products, and Italy, Czechoslovakia,

<sup>1</sup> This article will be followed by a discussion of the 1945-46 food situation in Europe in an early issue.—Editor.

and Sweden provided 90 to 95 percent of their food supply. All of the remaining countries of Europe, however, depended to a considerable extent on imports. France, Germany, Finland, Austria, and Greece imported 15 to 25 percent of their food while Norway, Belgium, Switzerland, and the Netherlands imported nearly half of their supply.

### **Importing Countries Hit Hard**

With the coming of war, those countries heavily dependent on imports were forced to make drastic changes in production. First, the food output, in terms of calories, had to be increased wherever possible. This required a definite shift from the production of livestock to that of food crops. Secondly, all possible economies of processing and utilization had to be adopted. For example, the milling extraction rate of wheat and rye was increased from about 80 percent to more than 90 percent.

In Norway and the Low Countries, wheat was the major crop in prewar years, but because it was of inferior quality a large part was used for feed. With the coming of the blockade, however, a larger part of the wheat had to be utilized for food. The proportion of the rye crop used for food also was increased and the admixture of barley and oats with wheat and rye was required in making flour. Potato and vegetable production was increased wherever possible to provide more food and to supply roughage for cattle.

The increased utilization of crop production for food and the cutting off of the imports of feed concentrates required a drastic reduction in livestock production, particularly hogs and poultry which depend primarily on concentrates. Weather conditions during 1940 and 1941 also were unfavorable for crop production and hastened the liquidation of livestock. This temporarily increased the meat supply but by the end of 1941 livestock numbers and production had declined sharply. In a few countries livestock

numbers continued to decline after 1942, but this decline was partially offset by increases in others; so that for Europe as a whole the decline since 1942 was slight until 1945.

Since most of the shifts in agricultural output occurred fairly early in the war, a comparison of food production in the different countries in 1943 with that of the prewar (1933-37) average gives an indication of the changes made in an attempt to increase food supplies. The changes in countries of northern and western Europe are shown by groups of commodities in the accompanying table. The lack of statistical data does not permit a similar tabulation for the eastern European countries, but by 1943 production in these countries is believed to have declined relatively little as surplus products were sorely needed to provide food for the armed forces of the Axis.

These percentages measure the change in farm output and do not take into account the changes in the total food supply which were brought about by more effective utilization of the produce marketed from the farm, such as increasing the extraction rates of grains, skimming milk before it is made available for general consumption, etc. They do, however, take into account the changes in utilization of products from the farm. The increase in the production of bread grains in Denmark, for example, was only 16 percent, but the quantity utilized for food increased nearly five times. This shift in utilization was common in nearly all countries and the utilization of potatoes as food has also increased. In Germany, potato production was about 80 percent of prewar, but the quantity used for food was much larger.

### **Total Crop Output Below Prewar**

Despite efforts to increase production, output of crops grown for food in northern and western Europe in 1943 was about 5 percent below prewar. The greatest wartime shortage

was in edible oils and though several countries expanded their output sharply, total output was increased only 12 percent. Sugar production declined about 21 percent but most of the decline in crop output resulted from a 6-percent decline in the production of cereals. France, Italy, and Spain are all important cereal-producing countries and they recorded sharp decreases in output. The reduction in meats and poultry products was marked in all countries, but dairy production was maintained wherever possible because of the need for the vital food nutrients provided by these products. The greatest declines in dairy production were in the countries which normally exported dairy products or depended to a large extent upon imports for their feed supplies.

The prewar practice of importing large quantities of feedstuffs complicates the problem of measuring food production changes in many of the countries in northwestern Europe. This practice enabled farmers to specialize in the production of live-stock products and when they had to depend upon their own feed supplies production had to be reduced sharply. If allowance is made for the marked decline in imports from prewar to 1943, production for food in most of these

countries was somewhat higher in relation to prewar than is indicated by the change in total output. In the last column of the accompanying table, adjustments have been made for the change in feed imports because imported feedstuffs are used to supplement domestically grown feeds in the production of several different live-stock products. The volume of production from these products is difficult to measure accurately, but such an adjustment provides a rough measure of the net output of food products from indigenous production.

Statistical data are not available for measuring the total food output in European countries in 1944. Preliminary indications are, however, that total production was slightly smaller than in 1943 on account of the continued strain of severe shortages of labor, fertilizers, draft power, and machinery on agriculture's productive capacity. The greatest declines in production were in areas of actual combat. Production in Italy and the Netherlands was most sharply reduced, but production in Germany and several eastern European countries also was curtailed by military activities.

The impact of military operations during 1944 also accounted for some

# **Food Production in Selected Countries of Northern and Western Europe, 1943, as a Percentage of the Prewar (1933-37) Average**

[Measured in calories]

Country	Cereals	Fruits and vegetables	Edible oil crops	Sugar crops	Total crops	Meat, poultry, fish, eggs	Dairy products	Total live-stock	Total production	Total <sup>1</sup> adjusted for feed imports
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Norway .....	409	195	( <sup>2</sup> )	( <sup>2</sup> )	249	43	71	59	116	138
Sweden .....	100	112	( <sup>2</sup> )	102	105	76	95	89	98	-----
Finland .....	92	111	( <sup>2</sup> )	55	93	73	63	66	81	-----
Denmark .....	477	167	( <sup>2</sup> )	104	190	48	79	62	98	110
Netherlands .....	186	127	750	73	138	30	60	45	90	109
Belgium .....	255	109	( <sup>2</sup> )	60	137	31	69	46	94	112
Spain .....	72	81	122	47	74	92	98	94	80	-----
France .....	95	107	250	55	93	63	71	66	86	-----
Germany .....	100	111	282	90	103	56	103	75	94	96
Italy .....	85	77	69	100	83	97	53	91	84	-----
Total .....	94	100	112	79	95	61	87	72	88	-----

<sup>1</sup> As several countries imported large quantities of feed concentrates before the war, the extent of the change in food output is not fully reflected unless adjustment is made for these imports in the base years.

<sup>2</sup> No production in prewar years.

decline in production and had a marked influence both on the collection and transport of food and on its effective utilization. Food processing factories have been damaged or destroyed and many products could not be properly processed or stored. No doubt, producers of farm products have continued to eat at or near prewar levels and the decline in food output has been borne largely

by the nonfarm population. The continued fighting during 1944 also interfered with sowing of winter crops. This, together with unfavorable weather and the disrupting influence of land reforms, resulted in total plantings much below those of previous years and much below the acreage which has been planned.

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*Office of Foreign Agricultural Relations*

## American Soybean Output in the Spotlight

**S**OYBEANS, the wonder crop of the Orient, is now Queen of American oil crops. Here its production has increased fortyfold in the past two decades. One of nature's most versatile crops, it has traveled far, if not fast, from Mukden, Manchuria to Decatur, Ill., in 50 centuries. Providing the principal source of income to thousands of growers, averaging a third of a billion dollars during the past 3 years, the soybean is 1 of the Nation's 10 leading crops, ranking with wheat, corn, cotton, and similar traditionally famous American crops.

### Output Increased Fortyfold

When the "lights went out" in Europe in 1939 and America entered the war 2 years later, almost overnight soybeans became a critical war crop to meet the essential needs for domestic vegetable oil because Far Eastern sources had been cut off. American farmers increased the acreage of soybeans harvested for beans from 4 million acres in 1939 to 10 million in 1942, about 2½ times in 2 years. In 1942 the production reached the then staggering total of 187 million bushels. But in 1943 American farmers bettered their 1942 output by producing 193 million bushels, more than 40 times the 1924 output 20 years earlier. Production in 1944 continued high but not quite equal to the 1943 record crop, and the 1945 crop is now expected to come close to last year's near-record output. The combined soybean

production of these 4 seasons almost equals that of the previous 2 decades.

Today the soybean is primarily a Corn Belt crop. Last year 84 percent of the Nation's total acreage harvested for beans was grown in the five States of Ohio, Indiana, Illinois, Iowa, and Missouri. A year ago these five States raised almost 9 million acres of the 10½ million grown in the entire country, and 89 percent of all the beans produced in the entire country. Illinois, by far the leading producing State, harvested over 70 million bushels of beans during each of the past 2 years or almost twice as many as Iowa, its closest rival. Although the Soybean Belt coincides rather closely with the Corn Belt, soybeans are produced in other areas such as the Delta States and Eastern Seaboard area from Pennsylvania through North Carolina.

### Southern Crop Originally

Thirty years ago the soybean producing area of this country was primarily the Southeastern States, comprising the area south and east of the Ohio and Mississippi Rivers. It was then considered a hay crop with the production of beans a minor consideration. During the early days of the crop in this country it was not considered feasible to grow it in the Northern States because the weather was considered too severe and the growing season too short for the crop to mature. Thanks to experiments and plant breeding quicker maturing

varieties were developed and the comparatively short season in the northern latitudes seemed to hasten plant development, especially development of the pods and beans—the very thing that has made the soybean one of America's wonder crops.

The history of the soybean is long and interesting. More than 5,000 years ago it was an important food for the people of China and other sections of the Orient. It was one of the oldest crops grown by man but was little known to the western world until the end of the seventeenth century. Though first mentioned in American literature in 1804 it was not until a comparatively few years ago that the crop came into its own in this country.

As a hay crop soybean acreage expanded rapidly in the East Central States and into the southern parts of Indiana and Illinois. Expansion before World War I did not carry much farther because as a hay crop soybeans could not compete successfully with red clover and alfalfa. North

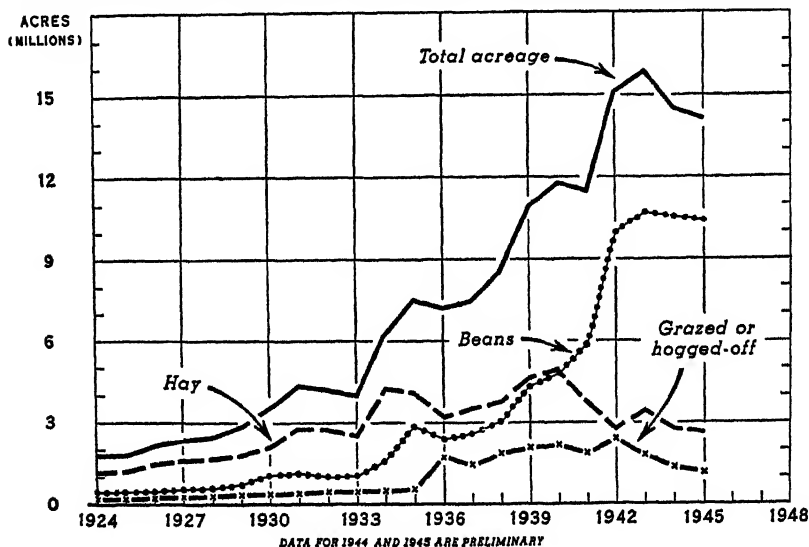
Carolina crushed the first American soybeans for oil in 1915. Although acreage shifts began to occur by 1924 and North Carolina was still the leading State as far as total acreage was concerned, Illinois had become the leading State in the production for beans. The acreage had already begun to shift to the North Central States—the traditional Corn Belt—and today this group of States dominates the production for beans.

In contrast, the national acreage of soybeans has not changed radically in the past 3 years and the Soybean Belt has seemed to establish a definite pattern. Through trial and error farmers are beginning to discover where the crop grows most successfully and where it should be grown with caution.

Probably the most important question now before the soybean producer is: How much of the war expansion can be maintained on a profitable basis in the future?

Regardless of the adverse factors regarding the crop such as compe-

#### SOYBEANS: ACREAGE FOR HAY, BEANS, GRAZED OR HOGGED-OFF, AND EQUIVALENT OF TOTAL SOLID ACREAGE, UNITED STATES, 1924-45



tition from both domestic and imported vegetable oils, there is a bright side. Rapid strides are being made in the development of new varieties adapted to specific areas. Farmers can be assured that progress and better yielding varieties, new uses for soya products for both food and industrial purposes, will all aid the producer in the coming years. Facilities for processing soybeans have greatly expanded during the war years. Even with the war in the Orient over, it may be

many years before soybean production in that area can meet more than local demands, with little for export. The potential uses of the soybean seem only to have been scratched. It seems reasonable to expect that expanded uses of soybeans and soybean products will maintain the soybean as one of America's principal crops, at least in the immediate years ahead.

R. F. GURTZ and  
C. E. BURKHEAD

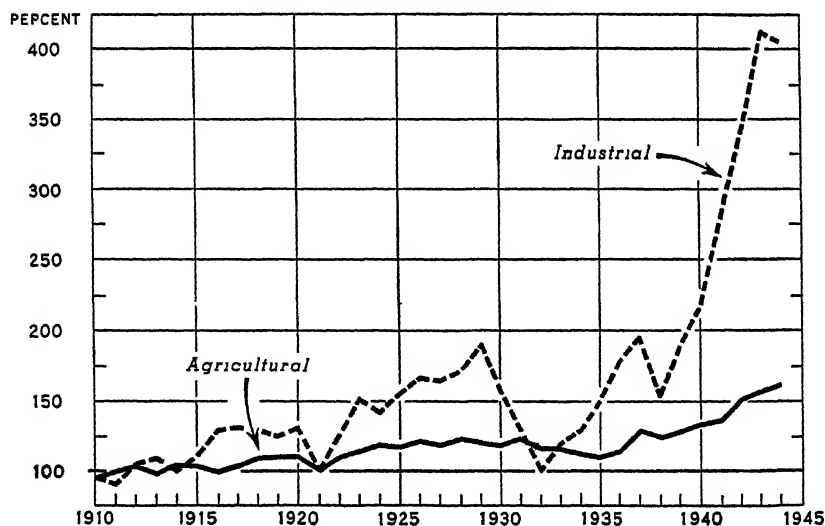
*Bureau of Agricultural Economics*

## Wartime Production Trends Per Worker

**T**HE volume of goods produced per worker in both industry and agriculture increased nearly one-half during the war. In agriculture, this increase occurred at a time when the number of workers were declining appreciably while the total output was rising at a more rapid rate than in prewar years. In contrast, the increase in industry—manufacturing and

mining—was accompanied by a large increase in the number employed and an even larger increase in total production. These increased outputs per worker are largely the result of increased mechanization and improved technology, combined with the stimulus of unprecedentedly large wartime demands. The wartime increases followed longtime prewar upward trends

VOLUME OF PRODUCTION: AGRICULTURAL AND INDUSTRIAL, UNITED STATES, 1910-44  
INDEX NUMBERS (1910-14=100)



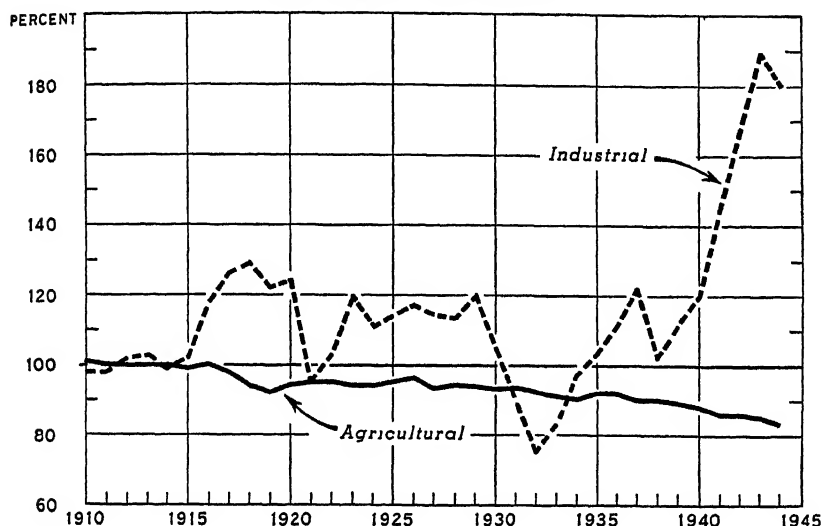
in productivity, but the rate of increase has been much greater than in the prewar period.

The volume of agricultural commodities produced in the United

States increased about one-fifth from 1910-14 to 1935-39. In contrast, the volume of industrial production—the output of factories and mines—increased nearly three-fourths during

### EMPLOYMENT: AGRICULTURAL AND INDUSTRIAL, UNITED STATES, 1910-44

INDEX NUMBERS (1910-14=100)

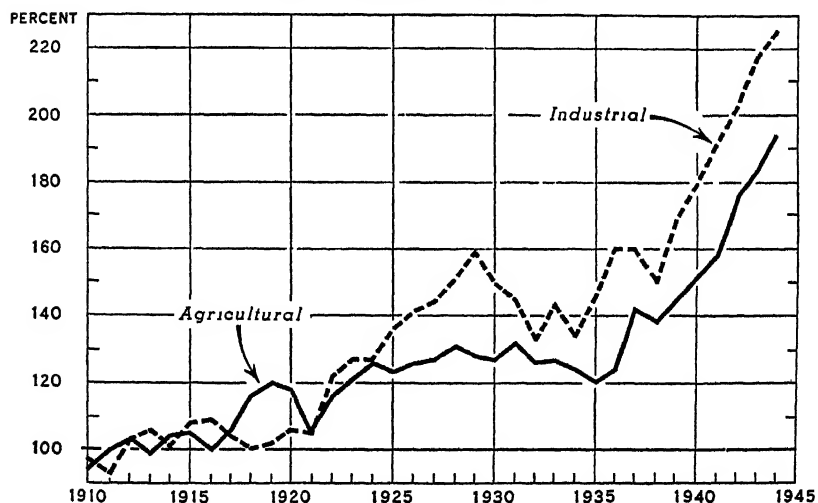


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### PRODUCTION PER WORKER: AGRICULTURAL AND INDUSTRIAL, UNITED STATES, 1910-44.

INDEX NUMBERS (1910-14=100)



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the same period. However, total agricultural production in prewar years was much more stable than in industry. Industrial production dropped nearly 50 percent from 1929 to 1932. The largest change in agricultural production during a period of comparable length was an increase of 18 percent from 1921 to 1924.

### Factors Affecting Trends

Numerous factors influence the output of both agriculture and industry. In agriculture, weather and resulting crop yields have been important. The effects of adverse weather on production are spread over two or more years. With crops, yields are low and production small the first year, while livestock production is reduced the following year because of smaller feed supplies.

Changes in industrial production have been closely related to the business cycle and general economic conditions. Industrial production dropped materially in 1921 in the depression following World War I. The severe depression of the early 1930's produced the largest drop and the recession in 1938 was accompanied by a decline of about one-fifth.

The demands of World War II were responsible for about a 150-percent increase in industrial output and a rise of a third in agricultural production above the 1935-39 average. The output of the metal fabricating and chemical industries showed the largest increase during the war because of the direct military use of many of the products of such industries. The production of raw materials for industry increased much less because the use of many raw materials for civilian purposes was greatly reduced. Also many types of war goods require considerably more fabrication than do most civilian goods. This has resulted in a greater increase in the output of finished goods than in the production of raw materials for industry.

The number of persons engaged in agriculture declined rather steadily

from the beginning of World War I to the outbreak of World War II, with the average number employed in 1935-39 about 10 percent smaller than in 1910-14. The number employed during early 1930's was apparently unaffected by the depression which started in 1929 and, contrary to the opinion of many, farming was not a very large-scale refuge for unemployed people at that time, though total farm population increased while agricultural employment was actually declining.

The decline in agricultural employment was accelerated during World War II. From 1939 to 1944 it declined nearly 7 percent, about 1¼ percent per year or three times the prewar rate.

Employment in industry, that is, manufacturing and mining, was characterized by wide and irregular fluctuations throughout the period prior to World War II, though the trend was downward. The first World War and subsequent fluctuations in the business cycle appear to have been the major factors accounting for the irregular shifts. The depression in 1921 saw a decline of 23 percent in the number working and the depression of the early 1930's saw a 31-percent decline.

During World War II, industrial employment increased rapidly in response to the need for munitions of all sorts. The increase from 1935-39 to the peak reached in 1943 amounted to 73 percent. The increase in World War I was much smaller—29 percent from 1910-14 to 1918. All of the increase in industrial employment in World War II occurred in manufacturing, where the number of workers rose 79 percent from 1935-39 to 1943. In mining, the number decreased 7 percent during the same period. From 1910-14 to 1918 the number of factory workers rose 31 percent and the number employed in mining 11 percent.

While agricultural and industrial employment from the end of World War I to the outbreak of World War

II in Europe was declining, the total number of people employed in the United States was increasing. Unfortunately, data showing total employment since 1910 which are exactly comparable to the figures used for agricultural and industrial employment are not available. However, data published by the National Industrial Conference Board indicate that total employment in the United States increased approximately 17 percent from 1910-14 to 1935-39. Employment outside of agriculture, mining, and manufacturing increased about 38 percent. The largest increases occurred in trade and service occupations.

### Greater Output Per Worker

Since 1910 there has been an upward trend in production per worker in both agriculture and industry. The increase over the entire period from 1910 to 1944 has been somewhat greater for industry than for agriculture, but during World War II the rise was slightly greater in agriculture than industry. From the 1935-39 average to 1944, production per worker in agriculture increased 45 percent as compared with 43 percent for industry.

During the first World War, agricultural production per worker rose considerably and in 1919 was 20 percent above the 1910-14 average. In contrast, industrial production per worker declined about 8 percent from 1915 to 1918. No comparable decline

in industrial productivity occurred even at the start of World War II.

The year 1929 saw the peacetime peak in industrial production, employment and production per worker, followed by very large declines during the next 3 years. From 1929 to 1932, industrial production declined 57 percent, industrial employment 38 percent and industrial production per worker 16 percent. Industry generally did not reduce the number of workers in proportion to the decline in output. Consequently, the physical output per worker declined, although declines in wage rates and hours worked may have prevented the output per dollar of wages from declining. The recession of 1938 produced the same effects on a smaller scale as appeared in the early 1930's.

Agricultural production per worker also declined during the depression of the 1930's, but the timing differed considerably from that in industry. Output per industrial worker reached a peak in 1931 and then declined about 9 percent by 1935, while agricultural employment changed only 1 percent. The low point in agricultural output per worker in 1935 was largely the result of weather and its effect on crop yields. Crop yields in 1934 were 10 percent below the 1923-32 average. This lowered production in both 1934 and 1935, because much of the feed consumed by livestock in 1935 was produced in 1934.

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## Pan-American Agricultural Conference

ON the eve of the Japanese surrender prominent agricultural leaders from the 21 American republics gathered in Caracas, Venezuela, from July 23 to August 7 to compare ideas and lay the groundwork for the future of peacetime agricultural programs in the Western Hemisphere. This was

the Third Inter-American Conference on Agriculture, the first being held in Washington in 1930 and the second at Mexico City in 1942.

Ministers of agriculture or other cabinet officers headed the delegations of eight countries. Leaders of farm organizations, Government agricul-

tural experts together with the Under Secretary of Agriculture, and representatives of State agricultural colleges and experiment stations composed the United States Delegation.

### **Basic Principles**

During 2 weeks of intensive study and deliberation, a number of resolutions were passed which have far-reaching significance for farmers everywhere in the Americas, and for the government agencies and business firms who work directly with farmers. The conference was notable for its emphasis upon questions involving inter-American economic policy and for its clear recognition of mutual dependence and the necessity of harmonious, united action in meeting the agricultural adjustment problems certain to be encountered now that the war has ended.

Many of the 98 resolutions adopted reemphasize the benefits to agricultural development of exchanging students and scientists, thereby spreading knowledge and application of modern agricultural science and making possible improvements in the income and living of farm people. The collaboration between various Latin-American governments and agencies of the United States, notably the Department of Agriculture and the Institute of Inter-American Affairs, was commended and endorsed, with the recommendation that it be continued but given "as large an inter-American character as possible."

Other resolutions, in the same vein, recommended that governments which have not already done so strengthen their agricultural education institutions at primary, secondary, and college levels, their agricultural extension services, and their farmers' cooperative organizations. Also endorsed was the idea of comprehensive agricultural development plans by national governments in order to assure high incomes and good living to farmers and an abundance of food and other agricultural products for city consumers.

In both previous Inter-American Conferences on Agriculture, in 1930 and again in 1942, resolutions had been adopted urging the establishment of some kind of inter-American credit institution which would meet the credit needs of an expanding agriculture. The United Nations agreements on International Monetary Stabilization and the World Bank for Reconstruction and Development, at Bretton Woods in 1944, extended these concepts to world dimensions, interrupting legislative processes looking to the establishment of the Inter-American Bank, as earlier proposed.

The American republics at Caracas implicitly endorsed the Bretton Woods plans, but urged special consideration in the administration of the monetary fund for those republics which have established preferential exchange rates to facilitate war-needed agricultural production. Otherwise, it was believed, undue dislocations and maladjustments might result in their economies.

The Caracas Conference also specifically recommended that the realization of the regional aims for an inter-American agricultural credit institution be entrusted to the World Bank for Reconstruction and Development. It was further proposed, however, that there be established a special department for the extension of agricultural credit to the American countries. At the same time, the American nations were called upon to create the necessary national legal instruments to implement the operations of the contemplated World Bank.

### **Trade Policies**

Elements of a regional point of view were reflected in certain recommendations concerned with studies and economic policy in the realm of agricultural production planning and trade. Specific reference was made to the so-called special or industrial crops (i. e., rubber, hard fibers, medicinal plants, insecticides, vegetable oils, and

others). It was pointed out that the scarcity of these products in times of war weakens the national defense and brings great hardship to the civilian populations. The conference asked that Inter-American economic policy now provide a permanent place for these strategic crops in the agriculture of the Americas.

Certain basic principles were agreed upon which should govern the collective readjustment of agricultural production and trade to postwar conditions. They recognize, first, that expansion of production and consumption provides the only durable solution, and that efficiency of production, based upon natural advantages, must be a cardinal principle in the adjustment programs. The principle of relative efficiency, however, must be moderated in its application out of recognition of the traditional production patterns of the several countries, and of the fact that the necessities of war have induced inefficient production in some instances. The adjustments must be orderly and gradual if national economies are not to be unjustly and unduly disturbed. The income and living of producer groups must be protected without, however, disregarding the rights of consumer nations to dependable and adequate supplies at reasonable cost.

### **International Agreements**

To these ends, the American nations were called upon to adopt appropriate measures of effective cooperation, avoiding artificial measures of exaggerated nationalism, maximizing technical collaboration, reducing trade barriers, avoiding "dumping," and promoting sound agricultural industries in order to increase employment and income for rural workers.

It was recognized that the application of expansionist economic policies, as endorsed by the conference, might on occasion result in temporary surpluses of specific commodities, and that international commodity agreements may constitute an appro-

priate means for solving these problems. Certain basic principles were declared, to serve as a basis for such agreements.

International agreements should cover specific commodities; their formulation and administration should have the participation of both producer and consumer nations, according to their respective interest; efficiency in production and international cooperation in necessary adjustments are essential; equitable division of the market and reasonable price protection, with accompanying measures to expand consumption are also important. No agreements implying limitation of production or export should be applied until the basic causes of the problem have been investigated, and until it has been conclusively established that a burdensome excess of the commodity actually exists or is threatened, and that the condition cannot be corrected through the operation of normal market forces. Moreover, a necessary counterpart of such an agreement is a companion program of adjustment calculated to assure substantial progress toward solution of the problem during the life of the agreement. It was further recommended that all such agreements be carefully limited in their duration and that they be coordinated in accordance with the recommendations of an international agency charged with the study of the operations of all such international commodity agreements.

### **Related Organizations**

In the Caracas Conference, the American nations recognized the pre-eminent place of the Food and Agriculture Organization in world-wide planning and programs concerning food and agriculture, and at the same time that the food and agricultural programs of the American nations are of world-wide concern. The conference recommended that the Pan-American Union establish liaison with FAO to assure participation by the Pan-American Union in the meetings

of FAO. It was also recommended that the best methods of conducting future inter-American conferences be explored to assure integration of efforts of all international agencies dealing with food and agriculture, and the maxi-

mum effectiveness of their programs to the end that all peoples of the world might enjoy the highest attainable standard of living.

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## Trends in Tomato Production and Utilization

UNTIL about a century ago, the tomato, or love apple as it was formerly called, was considered a poisonous fruit in this country. Now it has attained the position of "king" of the vegetables, with a total "commercial" production in 1944 of nearly 4 million tons (150 million bushels) for fresh use and processing, and with a value of about 166 million dollars. In addition to this "commercial" production, possibly another 3 million tons were produced in farm, urban, and local-market gardens.

Tomatoes are now grown in every State in the Union, and on a commercial scale in most States. In 1944, only one-fourth of 1 percent of the total harvested crop acreage was devoted to "commercial" tomatoes, but the value of the crop amounted to a little more than 1 percent of the value of all crops.

### South American Product

Although the tomato is a perennial in its natural state in western South America, it is grown as an annual in temperate zones. Little is known of its early history and development, but apparently it was known to and eaten by the ancient Mexicans, who planted it in the maize fields and called it *tomati*. The earliest references in literature describe about the same forms that are grown today, and these forms have never been found in a truly wild state. It is believed, therefore, that the tomato was improved considerably beyond the wild state when Columbus discovered America.

Spanish traders introduced the tomato to Europe in the sixteenth century by bringing seeds from the New World. First grown as ornamentals, especially in England, by the end of the eighteenth century tomatoes were grown extensively in Italy for food purposes. But the people of the United States did not accept the tomato as being edible till half a century later.

### Rapid Increase After First War

After World War I, commercial tomato production in the United States increased rapidly through 1929, slightly more than held its own during the depression of the early 1930's, and again increased rapidly prior to and during the conflict just ended. During the period 1940-44, commercial production averaged nearly 3.5 million tons annually—about 2½ times the 1920-24 average of a little more than 1.3 million tons.

Industrial development and increased emphasis on the nutritive value of vegetables and vegetable juices have played a major part in the continued increase in production, although improved cultural methods and transportation and marketing facilities have also had their effects. The tomato is recognized as a good source of vitamins C and A.

There has been a tendency toward concentration of commercial tomato growing, especially in the areas more remote from consuming centers. In 1920, about four-fifths of the crop was produced in 11 States, while in 1944 these same States accounted for nearly

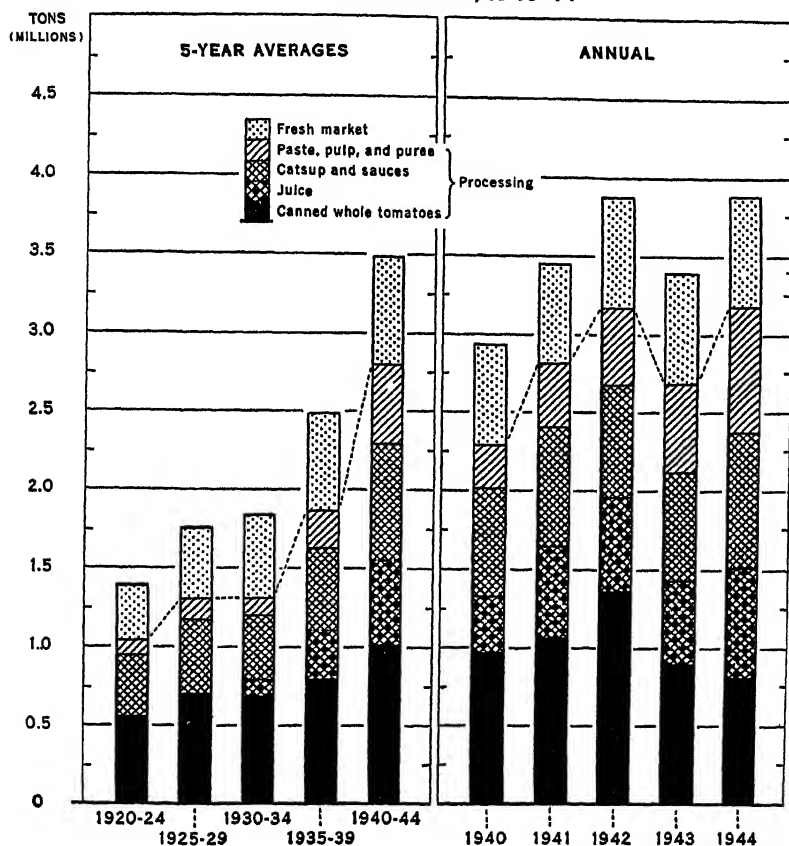
nine-tenths of the total commercial crop. California consistently has been the leading producer, followed by Indiana, Maryland, and New Jersey. These four States, combined, usually account for slightly more than one-half the commercial tomato supply.

Prior to 1940, approximately three-fourths of the tomato crop was processed—canned whole or manufactured into tomato products such as juice, catsup, etc. With war demands for the products at a high level, an average of four-fifths of the total crop was processed in the period 1940-44. As in the case of all tomatoes, California, Indiana, Maryland, and New Jersey

are the leading producers of tomatoes for processing, with Pennsylvania, New York, Ohio, Virginia, Delaware, and Utah rounding out the 10 more important States.

Although the tonnage of tomatoes utilized for canning whole has increased over the years, the percentage of the total thus utilized has dropped. Prior to 1935, slightly more than one-half of the crop for processing was canned whole, but since that time approximately four-tenths of the total have been so used. Even so, an average of slightly more than a million tons of whole tomatoes found their way into cans during the period 1940-44.

**TOMATOES: COMMERCIAL PRODUCTION AND UTILIZATION,  
UNITED STATES. 5-YEAR AVERAGES  
1920-44 AND ANNUAL, 1940-44**



U. S. DEPARTMENT OF AGRICULTURE

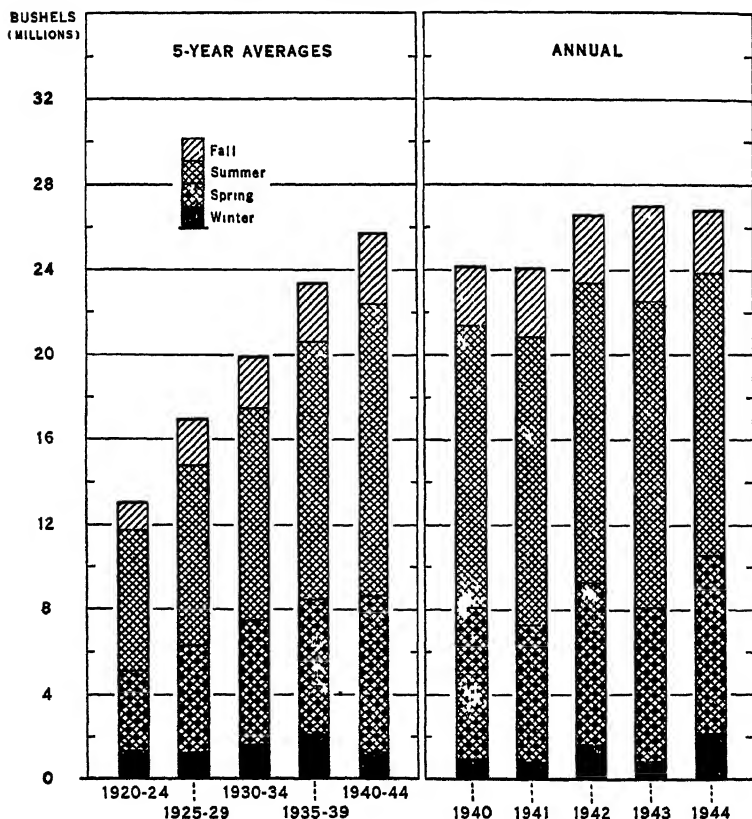
NE-2, 49496 BUREAU OF AGRICULTURAL ECONOMICS

The use of tomatoes for juice manufacture has grown phenomenally since 1929, the first year for which there is a record. In that year, about 5,000 tons of tomatoes were converted to juice. In 1944, about 700,000 tons were used in juice manufacture, with an average of over 500,000 tons annually, or about one-fifth of all tomatoes for processing, so utilized during the 1940-44 period. The rapid growth of juice manufacture doubtless stems, at least in part, from the emphasis placed on the nutritive value of the juice, especially from the stand-

point of vitamin C and A value.

The use of tomatoes in the manufacture of catsup and sauces also has increased in tonnage but decreased as a percentage of the total crop. During 1920-24, an average of approximately 380,000 tons, or nearly four-tenths of the crop, were manufactured into these products annually. By 1940-44, the average tonnage had increased to nearly 750,000 tons, which was about one-fourth of total production. War uses increased the demand for paste, pulp, and puree. From 1920-24 to 1940-44, the average an-

**TOMATOES: COMMERCIAL PRODUCTION FOR FRESH MARKET, UNITED STATES, BY SEASONAL GROUPS, 5-YEAR AVERAGES, 1920-44 AND ANNUAL, 1940-44**



nual tonnage utilized for these products jumped from less than 100,000 tons to more than 500,000 tons. Nearly 800,000 tons were used in 1944. Thus, nearly one-fifth of all processing tomatoes were manufactured into these products during 1940-44 compared with less than one-tenth in 1920-24.

#### **One-fourth Sold Fresh**

Ordinarily, about one-fourth of the total "commercial" tomato crop is sold for use in the fresh form. However, value of the fresh market crop in 1944 was nearly one-half the total value of all commercial tomatoes. These tomatoes, for the most part, are picked either in the mature green or pink stage and ripen after picking. Market tomatoes are grown commercially in most States, but the leading 10 States usually account for about eight-tenths of the total.

Fresh tomatoes are available the year round, starting with the winter crop in Florida and winding up with the fall crop in California, Texas, and Florida. All of the domestic winter crop, usually about one-tenth of the annual total, is grown in Florida. Peak shipments occur in February and March. These winter supplies are augmented by imports from Mexico and Cuba. The spring crop is grown principally in Texas, California, and Florida and usually comprises about three-tenths of the annual crop. Shipments are active throughout the spring months. The summer crop accounts for approximately one-half the crop for the entire year, and is grown mostly in Northern and Eastern States and in California and other Western States. Abundant supplies usually are available throughout the summer. The remaining one-tenth of the annual supply is harvested in the fall months. California is the principal source of tomatoes early in the fall, while Texas and Florida produce late fall crops.

The tomato is well established as a "must item" in the Nation's diet. During recent years, State and Federal agencies have carried on extensive research programs in an effort to improve the quality and yields of tomatoes. These efforts have resulted in the introduction of a number of new varieties with certain desirable characteristics, especially resistance to disease such as fusarium wilt, nailhead rust, leaf spot, leaf mold, mosaic and curly top, and adaptability to a specific environment. Although large smooth, high-quality fruits and high yields continue to be important objectives, the disease problem has become the primary consideration, and any new variety introduced is almost certain to be resistant to at least one troublesome disease. These developments should enhance the possibility of profitably growing high-quality tomatoes in the commercial areas of the country.

Experimentation in air transport may develop wider demand for fresh tomatoes. Possibly, vine-ripened tomatoes may be available in all large consuming markets the year round and it is believed this product will enjoy a greater demand than the "green wraps" now generally available from the more distant producing areas. However, air-transport of vegetables still is on an experimental basis, and it probably will be some time before facilities will be available for large scale air shipments. The quick-freeze process has provided wider outlets for many fruits and vegetables, but thus far tomatoes have not been successfully frozen and it seems doubtful that this outlet will apply to tomatoes. Better quality, high yields, and improved transportation and marketing facilities seem to offer the best solution to problems of the future.

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All live-stock
1910-14 average....	58	50	100	100	100	100	100	101	101	101
1915-19 average....	72	90	158	151	150	148	148	154	163	158
1920-24 average....	75	122	160	161	173	178	159	163	123	142
1925-29 average....	98	129	143	155	168	179	160	155	148	154
1930-34 average....	74	78	107	122	135	115	105	94	85	93
1935-39 average....	100	100	118	125	128	118	119	109	119	117
1940-44 average....	192	234	139	150	145	212	162	146	171	164
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	198	174	200	194
1944—August.....	232	324	152	178	170	-----	196	171	201	194
September.....	231	320	152	176	170	-----	198	179	200	196
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	318	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945—January.....	234	322	153	179	172	324	202	199	203	202
February.....	236	320	154	179	172	-----	200	183	209	201
March.....	235	318	154	180	173	-----	198	175	211	200
April.....	230	310	154	180	173	335	194	176	215	201
May.....	228	299	155	180	173	-----	192	179	217	202
June.....	220	297	155	180	173	340	191	189	216	203
July.....	212	-----	155	180	173	362	192	197	215	205
August.....	-----	-----	-----	180	173	-----	195	207	212	206

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>4</sup>
	Crops							All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops	
1910-14 average.....	100	101	102	98	98	99	-----	99	100
1915-19 average.....	193	164	187	168	187	125	-----	168	162
1920-24 average.....	147	126	192	189	149	148	143	160	151
1925-29 average.....	140	119	172	145	129	141	140	143	149
1930-34 average.....	70	76	119	74	72	94	106	86	90
1935-39 average.....	94	95	175	83	106	83	102	97	107
1940-44 average.....	123	119	245	131	159	133	172	143	154
1941.....	97	89	159	107	130	85	129	106	124
1942.....	120	111	252	149	172	114	163	142	169
1943.....	148	147	325	160	190	179	245	183	192
1944.....	165	166	354	164	209	215	212	194	195
1944—August.....	158	166	355	162	209	214	180	191	193
September.....	155	162	358	170	207	206	166	188	192
October.....	164	161	357	171	211	205	153	187	194
November.....	165	157	368	168	215	195	158	189	196
December.....	167	160	364	168	215	206	228	196	200
1945—January.....	169	163	365	163	214	206	262	200	201
February.....	169	164	360	161	215	211	223	197	199
March.....	171	166	359	163	215	211	203	196	198
April.....	172	162	362	163	215	221	259	204	203
May.....	172	161	363	165	216	227	193	198	200
June.....	173	162	364	169	217	237	269	210	206
July.....	169	161	364	171	221	237	244	207	206
August.....	167	158	367	172	215	214	240	202	204

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income, adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics. <sup>4</sup> Revised.

<sup>4</sup> Ratio of prices received by farmers to prices paid, interest, and taxes. <sup>5</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL SITUATION

OCTOBER 1945

*A Brief Summary of Economic Conditions*

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**F**ARMERS in 1945 again have achieved a high level of production now that total crop output is expected to equal the records established in 1942 and 1944. Since the start of the war, new highs have been set for virtually every important crop. Because of this as well as reduced military takings civilians will get larger supplies of most foods this fall and winter than at any time in the past 12 months when consumption, incidentally, was well above the 1935-39 level. In contrast, continental Europe faces one of the most critical food shortages of recent times. Food supplies produced there this year are a fifth below prewar and, even though relatively large, imports cannot be obtained in quantities to raise food consumption to anywhere near prewar levels. \* \* \* Removal of the lower grades of beef from rationing, thereby freeing more red points for other kinds of meat, will tend to strengthen over-all demand for meat this fall and winter despite a lowered civilian purchasing power and reduced military procurement. Thus the prices of most meats and meat animals are expected to continue near present high levels. No action on subsidies is now expected to be taken that will reduce returns to beef producers without at least 6 months advance notice. Feeders fattening cattle now for market next spring can discount the possibility of lower cattle prices due to reductions or withdrawal of the subsidies. \* \* \* Although the September parity index was at a new 25-year high, the index of prices received dropped 7 points below a month earlier, largely because of the sudden reduction in noncivilian food takings.

# Commodity Reviews

## FOOD SUPPLIES

**G**ENERAL improvement in the outlook, primarily a result of the sudden end of the war, means that civilians will get larger supplies of many foods this fall and winter than at any time in the past 12 months. Procurement of food for the armed forces from now on will be very much smaller than it has been for the last 2 years. Civilian demand for some foods may taper off this winter as consumer incomes decline, but the general demand for food will still be high relative to supplies. In addition, a share of the food made available by military cutbacks will be shipped abroad, especially to liberated areas.

This share is expected to include canned meats and some fresh and frozen meats (particularly lower grades of beef, which will be plentiful), some cheaper types of canned fish, canned and powdered milk, eggs, cheese, potatoes, some dry beans and peas, dried fruits, rice, some corn, and wheat. The United States can spare substantial quantities of these foods because good supplies of these and other commodities will be available for domestic civilian consumption.

This fall and winter, the domestic civilian supplies of meats, canned fish, canned fruits, fruit juices and vegetables, turkey, chicken, dried skim and dried whole milk, canned milk, fluid cream and potatoes will be materially larger than those of recent months.

Some increases in supplies are expected for butter, cheese, pork, lower grades of beef, and veal. A moderate improvement in the supply of most fats and oils is expected this fall and winter; the sugar situation is expected to remain tight until spring.

Civilian supplies of rice, dry beans and peas, and dried fruits may be somewhat reduced from last year by substantial relief shipments.

Cereal products, except those re-

quiring relatively large quantities of fats and sugar, fresh vegetables, citrus fruits, fresh and frozen fish, frozen fruits and vegetables, and fluid milk will continue plentiful.

## LIVESTOCK

**A**LTHOUGH cattle slaughter in July and August was a little below a year earlier, it increased materially in the last 2 weeks of August and continued seasonally large during September, exceeding last year's record for the period. But though calf slaughter increased in August and September, it was under that of a year earlier. Cattle slaughter probably will be large during the fall and winter because of a near-record number of cattle now on farms and ranches and a larger number of cattle on feed this summer than last.

Slaughter of ewes during the first 8 months of 1945 exceeded the large slaughter of a year earlier and was the highest of record for the period. With a further reduction in stock sheep numbers in prospect this year, the 1946 lamb crop probably will be less than the 1945 crop of 28.2 million head, the smallest since 1929 except for the 1935 crop which was drastically reduced by the drought of the previous summer.

New military requirements for meat for the last quarter of 1945 and the first quarter of 1946 are substantially less than purchases made a year earlier. While lend-lease shipments of meat were terminated in late August, some shipments of meat through other financial arrangements are continuing to certain countries formerly receiving lend-lease aid.

Various controls involving meat set-asides, quota restrictions on slaughter by nonfederally inspected commercial and farm slaughter, and OPA's fair distribution plan for meat were suspended in early September.

## DAIRY PRODUCTS

**B**ETWEEN August 13 and September 12, all wartime restrictions on sales and utilization of milk were suspended or terminated. The only existing restriction on production and consumption of dairy products are point values on butter.

Prices received by dairy farmers through March will be about the same as in the corresponding period of 1944-45. But returns probably will be higher because of shifts in utilization and larger dairy production payment rates. Over-all demand for dairy products is expected to exceed the supply, and more milk will be sold as fluid milk and cream than in the previous year. This will result in some diversion from manufactured products.

Consumption of heavy cream has increased greatly.

Prices paid for fluid cream in the Northeastern markets are higher than in previous months. For the past 2 years, consumption of fluid cream has been restrained, and receipts in the three large Northeastern markets (New York, Philadelphia, and Boston) have been about one-third below pre-war.

## POULTRY AND EGGS

**A**VERAGE prices received by farmers for eggs through November will show much less than usual seasonal increases. Significant declines—much more than seasonal—are expected after November, and prices will probably be at or near support levels in the early part of 1946, reflecting a reduction in military requirements and increased supplies of red meats. Egg production in the first quarter of 1946 probably will be about as large as in the first quarter of 1945.

Strong demand is in prospect for the record 1945 turkey crop of over 44 million birds, 22 percent above last year. Prices will decline from present levels, but such declines may not be

significant. Army procurement will be smaller than in 1944. But civilian demand will be strong because of a high level of consumer purchasing power. During the past 2 years, demand exceeded supply by a wide margin. Per capita consumption of turkey in 1943 and 1944 was  $3\frac{3}{4}$  to  $3\frac{1}{2}$  pounds, compared with 2.6 pounds in the prewar period (1935-39). This year consumption will be above 4 pounds per person.

Prices received by farmers for chicken during the next few months will decline from the all-time peak of 28.6 cents per pound reached last August. But such declines probably will be moderate. The demand-supply gap for chicken meat has been wide.

With substantial reductions in military purchases, all War Food Orders relating to chicken and turkey had been suspended or terminated by the end of September.

## FEED

**O**VER-ALL demand for feed grains and all kinds of byproduct feeds continued strong during September, as it has been during the previous months of this year. There has been little, if any, relaxation in the demand for feed concentrates this summer, an unusual situation when pasture and forage feed is abundant. The strong demand has persisted despite good to excellent green feed in practically all areas.

Heavy feeding of concentrates is reflected in the record weights of hogs marketed, the record milk production per cow, and the record production of eggs per layer on farms. Although there has been a record large production of byproduct feeds, and record-breaking marketings of corn during the 1944-45 season the available supplies were insufficient to meet the demand.

Late summer weather was very favorable for feed crops which improved prospects for 1945 materially. The 1945 production of corn, oats, barley, and sorghum grains was indi-

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1935-39 average.....	107	128	84
1940.....	100	125	79
1941.....	124	132	94
1942.....	159	180	106
1943.....	182	192	119
1944.....	195	170	115
<b>1944</b>			
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
<b>1945</b>			
January.....	201	172	117
February.....	199	172	116
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116
June.....	206	173	119
July.....	206	173	119
August.....	204	173	118
September.....	197	174	114

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

cated on September 1 to be 121 million tons, 7 million tons more than was indicated a month earlier. Production this year, based on the September 1 indications, would be about the same as in 1944. However, the carry-over of corn, oats, and barley at the end of 1944-45 feed year on September 30 probably was about 5 million tons greater than a year earlier, so that total supplies of the four feed grains for 1945-46 would be about 5 million tons greater than in 1944-45. About offsetting this larger supply of feed grains will be reduced feeding of wheat and rye, and a sharp reduction in imports of oats and barley from Canada. The 1945 production of grain in Canada is indicated to be considerably smaller than a year ago, and carry-over stocks there were reduced during 1944-45.

## FATS AND OILS

**R**EDUCTIONS in military requirements and termination of lend-

lease have eased the shortage in fats and oils. Civilian supplies of butter and lard for the balance of 1945 probably will be moderately larger than previously anticipated.

Quotas of fats and oils for manufacturing shortening and edible oils for civilian use have been increased. More oil and fat have also been allowed for civilian soap, paint, oil-cloth and linoleum.

Restrictions on uses of tung oil and on inventories of wool grease, neat's-foot oil, and lard oil have been terminated.

Total supplies of fats and oils, however, are substantially smaller now than a year ago and factory and warehouse stocks are materially less. Production and imports of fats and oils also are lower. As a result of the reduced supplies, exports and domestic civilian consumption are much smaller now than they were in the latter half of 1944. Total civilian use of fats and oils in 1945 in food and nonfood products is the lowest in many years and is estimated at around 65 pounds per capita compared with an average of 74 pounds per capita in 1937-41.

National average prices received by farmers for oilseeds will be nearly the same in 1945-46 as a year earlier. Price supports and ceilings are the same for oilseeds produced in 1945 as for those produced in 1944, except that ceiling prices for flaxseed at California terminals have been increased 5 cents per bushel. This increase will have only a slight effect on the national average price for flaxseed. Season average prices to farmers for oilseeds in 1944-45 were as follows: Soybeans \$2.06 per bushel, flaxseed \$2.90 per bushel, cottonseed \$52.70 per ton, and peanuts 8.05 cents per pound.

## FRUIT

**O**F the fresh deciduous fruits now in season, there are above-average crops of pears, grapes, and cranberries, but a very short crop of apples. The apple, pear, and grape crops are near or above

average in the western States but considerably below average in the eastern States, where the weather was unfavorable last spring. Despite the short apple crop, aggregate production of deciduous fruits in 1945 is only about 2 percent smaller than average although one-eighth smaller than last year.

The aggregate tonnage of the 1945 crops of almonds, walnuts, filberts, and pecans is about as large as that in 1944 and about one-third larger than average. Large crops of citrus fruits are in prospect for the season beginning this fall.

Prices for deciduous fruits the past summer have been near the high wartime levels of the preceding two seasons, in response to a continued strong consumer demand. In contrast, prices for oranges and lemons averaged lower, partly as a consequence of larger-than-usual supplies.

The commercial packs of dried fruits and canned fruits and fruit juices are expected to be about as large in 1945-46 as in the preceding

season. However, because of sharply reduced military requirements, civilian supplies will be considerably larger than last season.

## TRUCK CROPS

**B**ECAUSE of above-average acreages and yields for most truck crops for fresh market, market supplies this fall may be more than one-fourth larger than last fall and nearly 50 percent larger than average. Heaviest contributors to the total tonnage will be a record cabbage crop as well as large crops of carrots, celery lettuce, and tomatoes.

Prices received by growers for truck crops sold on the fresh market this summer declined more rapidly than usual and now are generally below last year's levels. However, seasonal price increases are expected for most truck crops beginning in November.

This year's total production of truck crops for processing is at a new record-high level for lima beans, sweet corn,

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Sept. 15, 1944	Aug. 15, 1945	Sept. 15, 1945	Parity price Sept. 15, 1945
	August 1909- July 1914	January 1935- December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.35	1.45	1.45	1.54
Rice (bushel).....do..	.813	.742	1.10	1.04	1.07	1.41
Corn (bushel).....do..	.642	.601	1.16	1.13	1.12	1.12
Oats (bushel).....do..	.309	.310	.642	.580	.583	.601
Hay (ton).....do..	11.87	8.87	14.70	14.60	14.30	20.70
Cotton (pound).....cents..	12.4	10.34	21.02	21.33	21.72	21.58
Soybeans (bushel).....dollars..	2.90	.954	1.93	2.12	2.07	1.67
Peanuts (pound).....cents..	4.8	3.55	7.51	8.19	8.29	8.35
Potatoes (bushel).....dollars..	.697	7.17	1.47	1.67	1.38	1.27
Apples (bushel).....do..	.96	.90	2.00	2.77	2.84	1.67
Oranges on tree, per box.....do..	1.51	1.11	2.90	1.97	2.12	2.05
Hogs (hundredweight).....do..	7.27	8.38	13.60	14.00	14.10	12.60
Beef cattle (hundredweight).....do..	5.42	6.56	10.10	12.50	12.00	9.48
Veal calves (hundredweight).....do..	6.75	7.80	12.40	13.80	13.40	11.70
Lambs (hundredweight).....do..	5.88	7.79	12.10	13.00	12.40	10.20
Butterfat (pound).....cents..	20.3	29.1	50.2	50.3	50.3	45.5
Milk, wholesale (100-pound).....dollars..	1.60	1.81	3.25	3.14	3.20	2.86
Chickens (pound).....cents..	11.4	14.9	23.7	28.6	27.5	19.8
Eggs (dozen).....do..	21.5	21.7	35.4	40.8	39.6	40.4
Wool (pound).....do..	18.3	23.8	41.8	41.7	41.4	31.8

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section

3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices

<sup>6</sup> Adjusted for seasonality.

and green peas, and at a very high level for virtually all other truck crops for processing. In addition, the abrupt ending of the war in August made possible the release to civilians of large quantities of canned vegetables formerly set aside for military use.

Competition from abundant supplies of potatoes and other fresh vegetables on the market at lower prices than last year, some slackening in demand because of a drop in employment, and the increased quantities of canned vegetables available for civilians may result in a burdensome carry-over of some commercially canned items at the end of the 1945 pack year. But prices to growers for this year's production of truck crops for commercial processing have already been established, for the most part, through preseason contracts with processors. Such prices are expected to average about the same as last year.

## POTATOES

**M**AJOR reductions in military requirements for potatoes together with increased availability of many other foods and some reduction in demand have all conspired with the bumper crop to put the 1945 crops of intermediate and late potatoes definitely in a surplus position.

The ceiling prices growers were receiving for all marketable potatoes a few weeks ago have now dropped to support levels. Through September 17, the Department of Agriculture purchased some 5,760 cars of potatoes in order to support prices at not less than 90 percent of parity. Potatoes so purchased are being kept out of normal market channels. Their disposition through September 8 was: 24 percent to starch manufacture, 13 percent to relief channels (including school-lunch program), 13 percent for livestock feed and experimental work, 9 percent to canners, less than 1 percent distilled for alcohol, and the rest temporarily in storage awaiting final disposition.

This year's sweetpotato crop is expected to be a little smaller than last year, though slightly above average. Because of recent reductions in military requirements for sweetpotatoes, civilian supplies will be about as large as the previous two seasons. Despite some possible slackening in demand, such a quantity probably can be sold at something higher than support prices.

## COTTON

**C**OTTON exports last season (August 1944-July 1945) totaled 2 million running bales. This compares with 1.1 to 1.5 million during the preceding four seasons and a 1934-38 average of 5.0 million bales.

Of the cotton exported last season, 643,000 bales or one-third went to the United Kingdom. Other countries receiving substantial amounts of cotton were: France, 509,000 bales; Canada, 364,000 bales; Spain, 258,000 bales; and Belgium, 93,000 bales. Despite the liberation of much of Italy quite some time ago, no American cotton was exported to that country last season. Before the war Italy was the fourth largest importer on the Continent having taken as much as a million bales of cotton in some years during the decade preceding the war. In 1932 the record quantity of 850,000 bales of American cotton was exported to Italy and an average of 400,000 bales during the 5-year period 1934-38.

According to the October estimate, a domestic crop of 9,779,000 bales of 500 pounds, gross weight, is indicated for the current season, compared with a 1944 production of 12,230,000 bales. The indicated yield for 1945 is 260.7 pounds and the estimated acreage for harvest, 18,008,000 acres. Indicated acreage is 12 percent smaller than in 1944; yield, 11 percent smaller; and production, 20 percent smaller.

Consumption in August totaled about 740,000 bales, equivalent to an annual rate of about 8¼ million bales.

This annual rate, although higher than the comparable figure based on consumption in July, is, nevertheless, materially lower than last season's actual consumption of slightly under 9.6 million bales.

## TOBACCO

THE 1945 domestic crop of tobacco is expected to exceed 2,000 million pounds, about 50 million pounds more than last year, and the largest crop ever produced. The increase this year over last is attributable almost entirely to flue-cured, the major cigarette type, since all other types except cigar binder tobacco are below 1944. Prices of flue-cured, the only type now being sold by growers, are slightly above 1944 and near the 1919 peak.

In relation to present and prospective requirements, carry-over stocks of most all types of tobacco are low. At the end of the 1944-45 season, stocks of all types except burley and dark air-cured were smaller than a year earlier. Burley stocks increased substantially last season despite the high rate of consumption, and the large 1945 crop will result in a further increase in the supply of burley. The record 1945 crop of flue-cured will result in a slight increase in the 1945-46 flue-cured supply. The supply of dark air-cured is larger this season, but the supply of cigar leaf is slightly below 1944-45.

Domestic production of tobacco products is continuing at a high level, although it appears likely that cigarette production will decline, because of the drop in military purchases. Domestic supplies of cigarettes are substantially larger, and appear adequate to meet demand, but shortages are continuing in the lower priced classes of cigars.

Exports of tobacco have increased since the end of the war in Europe mainly because of improved shipping and the opening of additional markets. The Commodity Credit Corporation was allocated about 354 million pounds and private dealers about 80 million

pounds of 1945 crop flue-cured for export. It is expected that by the beginning of the next marketing year, exports of tobacco will be handled solely by private dealers as in prewar years.

## WOOL

SHORN wool production in 1945, now estimated at 323 million pounds, is 7 percent smaller than in 1944 and 18 percent smaller than the 1942 record clip of 392 million pounds. With production of pulled wool likely to be smaller than last year's record of 71 million pounds, total production of shorn and pulled wool for the first time since 1929 will fall below 400 million pounds. More profitable returns from other farm products, manpower shortages, and the uncertain outlook for postwar wool prices are largely responsible for the sharp decline in sheep numbers and wool production since 1942.

Domestic wool continues to accumulate in the hands of the Government because Commodity Credit Corporation selling prices for domestic wool are much higher than prices of comparable imported wools. As of July 1, about 110 million pounds (grease basis) of the 1945 production of shorn and pulled wool had been purchased under the 1945 Government purchase program, but only about 30 million pounds had been resold to mills. The Commodity Credit Corporation on July 1 also held about 250 million pounds (grease basis) of domestic wool purchased under the 1943 and 1944 programs. Mills and dealers' stocks of apparel wool on July 1 totaled about 350 million pounds—mostly foreign wool.

Total United States mill consumption of apparel wool so far in 1945 has been at an annual rate of 1 billion pounds (grease basis). But with prices of domestic wool some 12 to 20 percent above those for imported wools, mills have continued to use domestic wool only where specified by military



orders. Mills report that only about one-third of the apparel wool used in the first half of 1945 was domestic wool. Even with large military orders the use of domestic wool was well below the rate of domestic production.

## LAND VALUES

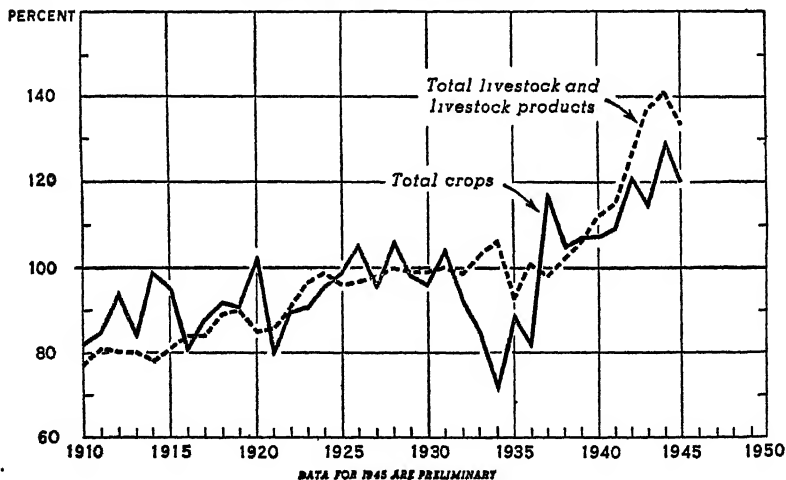
**D**ESPITE the end of the war, the farm land market during the next several months is likely to continue strong. While the volume of sales may be down somewhat from the high levels of a year ago, prices are apt to continue firm and probably advance moderately.

The realization that the number of remaining high income years may be quite limited and recollections of the consequences of the land boom after World War I are likely to make buyers more hesitant about purchasing farms at prevailing prices. At the same time there may be some easing in the supply of farms due to a backlog of retirements of elderly farmers and others desirous of selling at near peak prices.

But more than offsetting these moderating tendencies will be the continued operation of forces strengthening land values.

Record farm income levels and favorable returns on land investments, growing accumulations of purchasing power and abundant credit at low interest rates will all contribute to the maintenance of a strong demand. The war's end may add increased buying pressure from returning veterans and war workers. Strengthened demand from various other sources may also develop as a result of more limited industrial employment opportunities during reconversion, lessened incentives for maintaining savings in war bonds, and prospects for easing of machinery and labor shortages. Furthermore, during the period of uncertainty about the general price level, those holding or wanting to buy land as inflation hedges may offset to a considerable extent those selling who expect lower farm prices and incomes in the near future.

VOLUME OF PRODUCTION OF CROPS AND OF LIVESTOCK  
AND LIVESTOCK PRODUCTS FOR SALE AND  
FOR HOME CONSUMPTION, 1910-45  
INDEX NUMBERS (1935-39=100)



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

# European Food Prospects This Winter

**C**ONTINENTAL Europe<sup>1</sup> this winter and next year faces one of the most difficult food problems of recent times. Domestically-produced supplies, being 20 percent below prewar, will be the smallest in many years. While imports are expected to be heavy, they cannot be obtained in quantities necessary to raise food consumption to prewar levels.

Unfavorable weather has been a major cause of the sharp decline in food production. North of the Alps, an unusually wet cold fall and early winter so delayed planting, mainly of broad grains, that the ground lost could not be wholly regained in the spring; moisture deficiency later in the growing season was reported over wide areas, while some parts of north-west Europe had extended rains at grain-harvesting time. South of the Alps, from the Iberian peninsula to Greece, both crops and livestock suffered from a severe drought which developed early in the spring.

## Many Disrupting Forces

Moreover, the closing campaigns of the European war and its aftermath inevitably had repercussions on agriculture. In some areas, military operations made land unfit for agricultural use, at least temporarily. In eastern Europe, including parts of Germany, Austria, and Czechoslovakia as well as Poland and the Danube Basin, farm operations have been partially disrupted by excessive slaughtering and confiscation of draft animals and other kinds of livestock; damage, destruction, and removal of much machinery and equipment; population transfers; and the hasty introduction of land reforms and other economic and social changes. Widespread shortages of coal and transport facilities

still hamper production and distribution of goods farmers buy and sell. Changes in governing authorities consequent upon the liberation of Allied countries and the occupation of enemy territory necessarily disrupted agricultural and food controls.

## Output of Most Crops Way Down

Hard hit by this combination of adverse factors, the 1945 grain harvest is one of the smallest in years. The potato crop will also be short. Production of sugar beets is expected to drop more than the output of any other major field crop, and damage to factories and shortages of coal may hamper processing of the beets produced. While olive oil production may possibly increase, total output of fats and oils will be curtailed, due partly to decreased cultivation of oilseeds and partly to the reduction in livestock numbers in 1944-45. Even if the urgent demand for meat and fats in urban areas overcomes farmers' desires to rebuild herds, domestically produced supplies of livestock products are likely to be under the low 1944-45 level.

Food production will not fully reflect the decline in output of grains and potatoes compared to prewar, since most countries are continuing to extract more flour from grain than is customary and to use as human food a part of the grain and potatoes ordinarily reserved for livestock. The savings thus effected may not be as great as in the war years in some countries that are inclined to lower the high wartime extraction rates and redirect grain and potatoes to feed, but in the Danube Basin, for example, the trend is in the other direction. Assuming a pattern of crop utilization similar to that prevailing in the war period, and piecing together quantitative information which is necessarily incomplete and preliminary in character, food production in

<sup>1</sup> In this article "Continental Europe" refers to Europe excluding the British Isles and the Soviet Union.—Editor.

1945-46 is tentatively estimated at about 20 percent below prewar.

As continental Europe was on a deficit food basis in prewar times when production was much larger and the population (in 1936) somewhat smaller than at present, the gap between food production in 1945-46 and consumption at prewar levels is obviously very wide. The prewar deficit amounted to around 10 percent (including food produced from imported feed) for the continent as a whole, even with large surpluses available in eastern Europe. Net exports from Poland and the Danube Basin in the last prewar years included about 2 million short tons of wheat and rye, and almost as much of other grains, some 225,000 short tons of dry legumes, around 225,000 tons of meat and slaughter fats (exported mainly on the hoof), and nearly 80,000 short tons of eggs. Such has been the decline in output in eastern Europe, however, that no supplies of any significance can be expected from that region to help fill the deficits of western Europe in 1945-46. According to official sources, grain output in the Danube Basin is insufficient to satisfy domestic requirements, let alone reparations and requisitions in Hungary, Rumania, and Bulgaria. Livestock products are undoubtedly in even shorter supply than grains throughout eastern Europe.

#### **Denmark, Sweden Best Off**

Among western European countries, Denmark can maintain food consumption at a level somewhere between 2,800 and 3,000 calories per person per day and still export appreciable amounts of livestock products. Sweden could provide its population with approximately the same number of calories per person and have a small surplus. In the other western European and in the Mediterranean countries, consumption will drop to low levels unless imports are forthcoming in substantial quantities; tentative estimates of the average daily per capita energy value of their food pro-

duction in 1945-46 range from less than 1,400 calories in the Low Countries and Greece to no more than 2,200 calories in Czechoslovakia.

In estimating desirable minimum import needs of continental Europe, account must be taken not only of local food production but also of food distribution. Since most of the farm population, which constitutes around 40 percent of the continent's 350 million-odd inhabitants, will continue to consume almost as much food as before the war, and since black markets cannot be eliminated as long as food is scarce, the chief burden of any food shortage will be borne, as in the war years, by the middle and lower income urban groups who cannot afford to supplement local allowances to any great extent, if at all. Millions of consumers in these groups have been subsisting on as little as three-fourths, two-thirds, and even one-half of their prewar calories. Their diet has also been poor in quality. Bread has been heavy and coarse, meat and fat rations when available have been meager, and whole milk has been generally reserved for children and special adult groups.

#### **Large Imports of Food Needed**

In view of the marked decrease in domestically-produced supplies available for the nonfarm population that is implied in the downward revision of earlier 1945-46 production estimates, desirable minimum imports will be much larger than was suggested last spring. In order to raise legally available nonfarm supplies in liberated areas to 2,000 calories per person per day, to provide ex-enemy countries with enough food to prevent large-scale disease and unrest, and to permit some increase in imports into neutral countries, continental Europe would need to import about 18 million short tons of food, composed roughly of 15 to 16 million short tons of wheat, 1 million short tons of fats and oils (including the raw materials in terms of oil), about 750,000 short tons of sugar,

and some quantities of other food-stuffs such as meat, cheese, canned and dried milk, and legumes. In this computation, no allowance has been made for possible needs of Hungary, Rumania, and Bulgaria which are assumed to be able to meet minimum requirements from domestic sources.

It must be emphasized that the above estimates are not forecasts of imports. They are based only on considerations of quantities necessary to maintain the assumed minimum caloric intake, and to bring some improvement in the composition of the urban diet in liberated areas. Actual shipments will depend on many factors, notably the surpluses and deficits in other parts of the world and arrangements made for financing imports.

Production in continental Europe will increase in the coming year if the weather is reasonably favorable. The recovery will be stimulated to the extent that plans for increasing supplies of fertilizer and agricultural machinery are carried out. A period of years must elapse, however, before productive capacity, especially in eastern Europe, can be fully restored. Provided that purchasing power in importing countries and supplies in exporting countries permit a rapid return to prewar diets, imports of food and feed in continental Europe, as was the case after the first world war, are likely to exceed the prewar levels for some time to come.

LOIS BACON  
*Office of Foreign Agricultural Relations*

## Full Employment in Agriculture

THE idea of full employment as a national goal in peace received wide attention during the war, and now has attained almost universal acceptance. By early 1943, it had been demonstrated that unemployment could be practically eliminated during war and this raised the challenge to eliminate it in peace. With the actual arrival of peace, cancellation of war contracts and lay-offs are now driving home to millions of industrial workers the urgency of attaining this goal.

There is as yet no official definition of full employment. The proposed Full Employment Act of 1945 contains an implied definition in its reference to full employment as "the existence at all times of sufficient employment opportunities for all Americans able to work and seeking work."

The National Planning Association has offered the following definition: "Full Employment is defined, by common sense, as opportunity for workers

and for capital. The complete expression is full employment *opportunity*, and it comprises two additional concepts: Employment of men and money (1) at useful work, and (2) at good wages. 'Good wages' mean good in terms of actual purchasing power: wages and prices that spell an American standard of living." Sir William Beveridge in England has stressed the fact that full employment requires more jobs than workers so that the labor market will always be a seller's market.

The idea of full employment underlying these definitions or statements has been expanding. First it was negatively defined as a condition without unemployment, except for a minimum amount due mainly to job shifts and to new workers finding their first jobs—the so-called frictional unemployment. Later it was more positively defined as a sufficient number of jobs for all who are able to work and who wish to work. More recently,

full employment has come to mean a sufficient number of productive, regular, and adequately paid jobs, with the number of jobs equalling or exceeding the number of workers and work seekers. But the idea of full employment was conceived and has developed primarily in terms of employment in nonagricultural industries, with little reference to its direct meaning for agricultural workers.

Full employment in the nonagricultural part of the Nation's economy has been spelled out in terms of jobs, because 7 out of every 8 nonagricultural workers are job holders—wage or salary workers. Such a definition is inappropriate for agriculture because only 1 out of every 5 agricultural workers is a job holder, receiving a wage or salary. The majority of farm workers are farmers who are self-employed and the rest are about equally divided between wage workers and members of the farmers' families who work on an unpaid basis, mainly during the busy season of the year. A full employment formula of "plenty of jobs at good wages" thus overlooks the large majority of the Nation's farm workers.

### **Farm Work Highly Seasonal**

In applying the idea of full employment to agriculture, some notions of what it means have to be clarified. Full employment does *not* necessarily mean 12 months of work a year for every person who works on a farm during any part of a year. This would set an impossible standard for agriculture because of the marked seasonal variation in the number of persons working on farms. Much more than half of the persons who make up the seasonal rise in agricultural workers are housewives and students. When the season is over, they go back to their normal activities. As they do so, they become "non-workers" and are not classified as "unemployed." Therefore, the employment of such persons for less than a full year, most commonly as unpaid

family workers, is not at odds with the idea of full employment.

In agriculture as well as in nonagricultural industries, the idea of full employment does not presuppose converting the part-time or part-year workers into full-time workers, if such workers are not able or do not wish to hold continuous full-time jobs. Thus the housewife working in a department store during the Christmas shopping rush period, or the student working during vacation would be "fully" employed if able to get work throughout the time that he or she chose to be in the labor market.

### **More Part-Time Work No Answer**

On the other hand, the road to full employment does not lie in any wholesale conversion of full-time jobs into part-time jobs through a drastic shortening of the work-week for purposes of spreading the work. It is true that an artificial device of this sort would reduce the unemployment count, but it would produce only an illusion of full employment. While the absence of any unemployment above the minimum amount will accompany a full employment condition, it will not necessarily mean that full employment has been reached.

The existence of enough jobs to provide virtually full-year employment to all persons who are in the labor market for the entire year is the most important prerequisite for a full employment condition. In agriculture, the seasonality of labor demands poses difficult problems in attaining full-year employment for farm workers. Especially for the wage workers on farms is the problem of obtaining a satisfactory amount of work aggravated by this factor. Not only are the jobs available for many of the hired farm workers of a part-year nature, but during the weeks actually worked, the employment is often of a part-time nature. The duration of even these jobs is further curtailed by a host of economic and other conditions which impel farmers to hire as

many workers as possible to harvest mature crops in the shortest possible period of time. It is these conditions that in prewar years led to excessive accumulation of farm labor reserves in various areas during all or part of the year.

The criteria of full employment developed for nonagricultural workers apply in the case of hired farm workers. Agricultural wage workers can be considered fully employed only if enough work is provided them throughout the period they are available for work and if they are paid fair wages. But achieving full employment for hired workers in agriculture will require continued steady progress toward rationalizing the farm labor market. Effective work in this respect has been done during the war both by farm placement services and farmers through an orderly scheduling of the demands for farm laborers and a systematic directing of workers to jobs.

### **Job Placement the Cornerstone**

Employment or job placement services will continue to be the cornerstone in any organized program to minimize unemployment and reduce underemployment.

In addition, farmer-employers can individually and on a community-wide basis contribute materially to stabilizing and lengthening periods of employment afforded to their wage workers. But a full solution to the problem of achieving full employment for farm workers may not be possible within agriculture itself. A close integration of farm and nonfarm job opportunities together with technological advances that contribute to evening out the humps in farm labor requirements are also required.

For farm operators who have no other occupation, the idea of full employment in the sense of regular, productive, and adequately paid jobs has to be translated first into adequate resources to provide full-time work and secondly into adequate annual incomes. Achieving full employment

for farmers in this sense is probably going to be the hardest part of the total problem throughout the Nation. It will take the longest time. But no one could fairly claim that there was full employment in the country, even though national employment should be very high and national unemployment very low, so long as the labor of sizeable groups of farmers remains unutilized for a substantial proportion of the year, or is unproductive because of the lack of sufficient land, machinery, or other resources.

### **Many Years to Achieve**

Achieving full employment in agriculture may take many years, but the outlook is by no means disheartening. Most of the trends speeded up during the war were in the direction of providing fuller employment in agriculture. There was a decrease in the number of unproductive farming units, an increase in farm machinery and much more effective use of labor. Along with expansion in crop and livestock enterprises, good yields, high demand for farm products, and good prices, these trends led to an increase between 1940 and 1944 in the average net income per farm from \$788 to \$1,627, in terms of 1940 purchasing power. But even in the peak war year 1944, more than half of all farmers received less than this amount. Although many supplemented their farm income with wages from off-farm work, a great number of farm operators even in wartime were underemployed or ineffectively employed and had less than adequate incomes for maintaining a level of living for their families which would meet generally accepted American standards.

Full employment in agriculture is not just around the corner. It will take many years of progressive adjustments of farm population to agricultural resources with corresponding changes in the size and organization of farming units. Since the total volume of agricultural production in the foreseeable future is subject to

certain upper limits imposed both by total land resources and by demand for farm products, the total number of persons who can be employed in agriculture with adequate net returns for their labor is far smaller than the present number.

Maintaining high levels of non-agricultural employment will encourage the changes which need to take place before full employment in agriculture can be achieved. Suppose, for a minute, that the Nation gets through the war-to-peace transition period rapidly and quickly reaches high levels of nonagricultural employment with plenty of good nonfarm jobs for all who want them. Suppose, further, that sound planning and policy maintain this situation for at least a decade or so, with no depressions. These would be the conditions most favorable for progress toward full employment in agriculture, as no one would have to engage in unproductive or inadequately paid farm work who did not want to.

### Fewer Farms and Workers

Under such conditions, what are the factors involved in attaining full employment in agriculture? On commercial farms, as distinguished from purely residence units, a man-year of agricultural work of an adult male should yield an income adequate for the support of a family according to American standards of living. These standards would undoubtedly have risen after a decade or more of full employment in the nonagricultural sector of the economy. However, the past trends in labor productivity in agriculture, together with the prospects for further technological advances, certainly provide evidence that with consumer demand at a continued full-employment level adequate returns to agricultural labor could be achieved if all commercial farming units were adequate in production resources, and if advanced farm management practices were generally applied. This would mean a reduction in the present

number of farming units before full employment is attained in agriculture, even though there was no increase in large-scale farms. It would also require a reduction in the present number of farm workers, if the net returns for agricultural work are to approximate a "minimum-adequate" standard.

Any policy involving a forced shift from agriculture to nonfarm work for persons now ineffectively employed on farms would be contrary to American principles. But the history of farm-nonfarm migration during the last few decades has shown clearly that given plenty of nonfarm job opportunities, under-employed farmers and farm workers will choose to migrate to them. The present level of net returns to labor on many of the more efficiently organized, well-equipped, family-commercial farms is already such as to demonstrate that with the good demand for farm products which would be maintained in a period of sustained prosperity, adequate remuneration for farm work is already possible.

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*What Peace Can Mean to American Farmers. Maintenance of Full Employment.* U. S. Dept. Agr. Misc. Pub. 570, 28 pp. Washington. July 1945.

A sequel to an earlier report in the series called *What Peace Can Mean to American Farmers*, this report tells some of the ways in which full employment can be achieved.

*Farmers' Response to Price in the Production of Potatoes, 1922-41.* Ben H. Pabols and Saul B. Klamman. Processed. 10 pp. Bureau of Agricultural Economics. Washington. July 1945.

Uses the 20-year period 1922-41 for a study of the year-to-year fluctuations which have occurred in acreage, yield per acre, production, and price per bushel received by farmers. Shows how changes in production are closely related to changes in cost, price, and other conditions.

# A Rural County Looks to the Future

**R**EADJUSTMENT of the Nation's work force to peacetime needs is one of the most important problems now facing rural and urban people alike. A problem of virtually every community in the country, it has to be solved largely in each locality as the veterans and war workers return to their homes to reestablish themselves in what they hope is to be a permanent way of life.

Local farm leaders all over the country have been pondering the problem of full employment in their communities—not a few have gone beyond the thinking stage and attempted to do something constructive about it. And one rural community which has taken a big step in appraising the problem is Augusta County, Va., located in the fertile Shenandoah Valley, one of the important agricultural areas of the Atlantic Seaboard.

## To Appraise Plans of Residents

In appraising the readjustment of Augusta County's work force to peacetime needs, a survey was made recently to learn something of the plans of the people of the county for the next few years. This inventory differs from those made in other communities where the emphasis has been more on the potential physical capacities of the areas rather than on just the individual plans of the people in the communities.<sup>1</sup> For this reason the Augusta County approach, being less comprehensive but a very important first step, can be more readily adapted to the needs of other communities. Consequently, the findings of the survey summarized here may suggest the types of material other communities could collect and analyze in trying to appraise the future course of their areas.

Located between two mountain

ranges on the western border of Virginia, the Shenandoah Valley has a type of agriculture that differs from that in many southern areas as it is largely devoted to fruit, dairying, livestock, and general farming. Augusta County, at the southern end of the valley, is the second largest county in Virginia, with a population of about 57,000 of which about 20,000 live in the cities of Staunton and Waynesboro. This year's census places the number of farms in the county at about 3,880. Wheat, corn, apples, and milk are the chief farm products while textiles, chemicals, and furniture are the principal manufactured articles. The industries are concentrated in Staunton and Waynesboro which are also educational centers of considerable importance.

## Survey Keyed to Job Opportunities

It soon became apparent to the Augusta County Planning Board, a county agency authorized by State law, that in setting up the survey one of the first tasks was to learn something of the present labor force, to determine the extent of future employment opportunities and skills of the prospective labor force especially when veterans and war workers return, and to find out about the spending intentions of Augusta families in the next 2 years. Several State and Federal agencies helped the Board in making the survey which was directed largely to these three points.

The findings of the survey suggest that business and agriculture in the county will be very good during the next few years. But to provide jobs for the entire potential workforce, including veterans, war workers, and young people just growing up, the Board believes it necessary to employ as many workers as possible at their

<sup>1</sup> For example, see *A Rural-Urban Community Plans Ahead*, in the AGRICULTURAL SITUATION, July 1944, for a summary of the more comprehensive type of survey.—Editor.



highest skills and to obtain complete use of all the resources of the county.

### **Not Enough Farm Labor**

Best obtainable figures show that, under optimum conditions, the farm labor force will fall short of need. Should needs be much less, it is still expected that all seeking employment on farms can get jobs.

In manufacturing, a projected expansion in textiles will require about 1,100 additional workers, which would bring the demand for workers in all manufacturing to about 500 more persons than are in the visible supply. The wide variation in the existing labor force complicates matters and means there may be considerable difficulty in fitting workers to jobs.

In the wholesale and retail trade, the survey seems to indicate a surplus of workers, even under conditions of maximum employment, but this is partly offset by the prospective need of some additional workers in the fields of personal service, transportation, communications and public utilities.

The construction trade presents the most uncertain picture among the various groups as a number of firms went out of business during the war. Employers in this field who could be interviewed foresaw needs for only slightly more than half as many workers in the aggregate as had been employed in 1940 even though the survey of spending intentions, made later, reveals that building expectations were for several times as much construction as before the war.

In domestic service, a field largely confined to women workers, there appears to be a definite excess of jobs over workers. In finance, insurance and real estate the prospects are for a near balance between jobs and workers. In professional and related services the number of workers is expected to exceed the number of openings.

### **Fourth of Workers in Farming**

Of the workers employed in 1944, 25 percent were in agriculture, 29 per-

cent in manufacturing, 41 percent in the various service occupations, 3 percent in construction, and 1 percent in quarrying. In 1940 more than a third of the farms were less than 30 acres and more than a third of farmers reported annual incomes of less than \$400. Such a condition raises the question of combining some of the small farms into more desirable units of larger size and encouraging some of the farmers in this group to go into nonfarm work.

The survey indicates that one of the chief difficulties in providing jobs for all workers in the county lies in the fact that a large number of them with special skills may not be needed in their fields of specialization, even if employment is high. Three ways are suggested to cope with this problem: (1) Provide jobs in other fields, (2) expand established industries or start new ones, and (3) enlarge public works activities.

### **Families to Spend a Fourth More**

The second part of the survey, dealing with the spending intentions of Augusta County families, reveals that about 25 percent more will be spent on goods and services in the next 2 years than in the last 2 prewar years of 1939 and 1940. These expenditures will further enhance employment opportunities as well as benefit business and agriculture in the area.

Residents of the county expect to build nearly 800 new homes in the next 2 years, at a cost of about 2½ million dollars, compared with about 150 new residences erected in 1939 and 1940. Another 2,500 families intend to make more or less extensive repairs on their dwellings, including remodeling, insulating, plumbing, electrifying, and other improvements.

Farmers plan to build some 375 barns and outbuildings, spending almost seven times the amount spent on similar construction in 1939 and 1940. Farm real estate should be at a premium, as 182 persons intend to buy farm land in the next year or so,

compared with 48 farm purchases in the 2 prewar years.

Among consumer goods, there are plans to buy about 2,200 refrigerators, 1,300 washing machines, 1,000 radios, to mention only a few items. In addition, nearly 1,600 new automobiles and 600 used cars will make an expected total expenditure for cars, gasoline, tires, and repairs about 50 percent more than in 1939-40. This does not include the 300 trucks and 250 tractors farmers intend to buy. Taking into account all kinds of general farm equipment, Augusta farmers plan to spend twice as much in the next 2 years as they did for these items in the 2 years just before the war.

Food and clothing demands are expected to total about 14½ million dollars in the next 2 years, considerably above that spent in the 2 prewar years.

#### **No Savings in Fifth of Families**

To finance these expenditures the

people of the county expect that two-thirds of the costs will come from war savings and credit based on those savings, while one-third would thus come from current income, which means that a rather high level of employment will be necessary if the spending expectations are to be fully realized. This possibility is further pointed up by the fact that about half the savings are in the hands of about 3 percent of the families, while nearly one-fifth of the families report no savings.

This survey, while making no claims for complete statistical accuracy, will be of real help to farmers and other persons in Augusta County in appraising the future course of their community. It will provide a basis for determining the steps necessary to insure a continuing full employment, one of the guarantees of a prosperous agriculture.

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## **Farm Lands for Veterans and Others**

THE war's end brought renewed interest in farm land available for returning veterans, war workers, and others—and quickened the pace of many Federal, State, and local agencies in assisting the farm-minded to get established. Inventories indicate that there may be 2½ million prospective farmers and farm workers seeking farms and farm jobs in the next 5 years against a million and a half full-time farms and farm jobs in sight. Moreover, although 800,000 to 900,000 farm-operator job opportunities will be available, well-informed persons warn that these will require time, perhaps 5 years or more, to realize, and that even then they will not meet the entire demand for good farms.

Farming opportunities in the next 5 years will come from the following sources: (1) Farm operator vacancies on existing farms from retirements, changes to other jobs, and from natural causes such as sickness, old age, and deaths—800,000 farms; (2) release and sale of surplus military land, plus some publicly-owned land acquired for settlement purposes—10,000 farms; (3) creation of new farms on publicly-financed irrigation, drainage, and flood control projects—50,000 farms; (4) development of new farms in forested and other nonfarm land areas not requiring public drainage or irrigation, or flood control projects—the number of new farms developed in this class will depend upon the level of employ-

ment and public policies relating to land and farm development; (5) part-time farms near industrial centers or other sources of nonfarm employment; and (6) nonoperator farm workers including skilled workers such as farm managers, dairymen, mechanics, tractor and machinery operators, and general farm laborers—500,000 to 750,000 jobs.

#### **Existing Farms**

It is now estimated that about 160,000 farms of all sizes and types will become available annually for new operators in the next 5 years because of farmer retirements, changes to other jobs, and natural causes. This normal process of retirement of older farm operators and replacement by younger men will provide a total of approximately 800,000 farm operator openings in the 5-year period from 1945 to 1950. These farms, however, consist of farms of all sizes, types and conditions, ranging from a few big business farms and ranches to family-type commercial farms, subsistence farms, and part-time farms.

But farm-income statistics reveal that about half of these farms had incomes of only \$600 or less in 1939. While farm incomes are considerably higher now, a look at prewar incomes gives some indication of what may be expected under more normal conditions in the future. Accordingly, many of the expected farm operator vacancies will be on inadequate farms that will require considerable development, including investment of labor and money, and in some instances the addition of more land to make them furnish adequate incomes for most farm families. Some of the farms likely to become vacant are too small, or do not have suitable land, and will never be adapted to full-time farming without consolidation with other farms. Many small farms, however, where located near sources of nonfarm employment, can be used as part-time farms and rural residences by off-the-farm workers or by persons with pensions or other sources of income.

In addition to the existing farms which will be for rent or sale to new operators, redevelopment of suitable surplus military land acquired from private owners and publicly owned settlement land would provide around 10,000 family-sized farms. Purchase prices for the military land and redevelopment costs will not be low. Much of the land will need improvements, levelling, and removal of certain obstacles to fit it for farming again.

#### **New-Land Farms in West**

Termination of the war is the signal for full-scale activity on national reclamation and flood-control projects. Detailed plans and specifications of the Corps of Army Engineers are now ready, or will be ready under present schedules, for a volume of work under the flood-control program authorized by Congress estimated to cost over 1 billion dollars. While much of the planned flood-control expenditure is for large structures to protect urban and industrial centers and to facilitate transportation, much likewise will protect or increase the protection of agricultural land and make it feasible to develop much presently undeveloped land in the Mississippi and Missouri River Valleys as well as in several other localities.

End of the war also found the Reclamation Service with 60 million dollars for construction and a program totalling over 1 billion dollars authorized by Congress. With available funds, work will be expedited on the Central Valley project of California, the Columbia Basin development of Washington, the Colorado-Big Thompson project of Colorado, Davis Dam on the Colorado River, and projects to supply Arizona, parts of the upper Missouri River Basin and other western areas with water.

In the major reclamation, flood-control, and drainage projects of the Western States and the Mississippi Valley it is estimated that possibly 10,000 new farms can be developed per year during the next few years, or

a total of 50,000 farms in 5 years. These estimates take into account the stage of completion of the major structures and facilities, funds available, acreage of new land and its condition, water supply for old and new areas in irrigation projects, size of farms, time required to convert raw land into going farms, and the past record and demand for new farm development.

### **Reclaimed Lands in South**

Although plans for large-scale Federal projects are not yet sufficiently ready to provide an incentive to develop new areas other than those needing irrigation or protection from floods, numerous local and State drainage district organizations and individuals and corporations are planning programs of drainage and clearing to develop new land. For example, although the best use for large areas of Coastal Plain land, located in a broad belt around the coast of the Middle, South Atlantic, and Gulf States, is for forests, wildlife, and grazing, for other portions the best use is arable farming. It would be costly to develop this land into well-improved farms even though much of it is as good or better than many areas now being farmed. Eventually, however, more of it will likely be brought into cultivation as additions to inadequate farms and as new farms. By comparison this Coastal Plain land could be developed with less public investment per acre than much of the land being proposed for development by irrigation and flood protection.

Estimates of public cost necessary to provide drainage for many large Coastal Plain areas range from 20 to 30 dollars per acre. As is the case for land being publicly developed by irrigation and flood control, much of the drained land also requires considerable additional private expenditure for clearing, levelling, farm ditches and roads, fences, and buildings. Like many of the areas proposed for new irrigation and supplemental water supplies, development of Southern land by drainage and clearing would pro-

vide a practicable means of stabilizing and supplementing existing agriculture by encouraging diversified farming, including the much needed pasture and hay acreage long recommended.

Even though public investment in developing Coastal Plain land has lagged during the past few years, in several areas numbers of farms and improved acreage increased both in the depression period and the war years. This increase has been especially marked near some of the new industrial centers and military areas in southern Mississippi and Alabama, eastern Georgia, Florida, the Carolinas, and Virginia. Other Eastern areas showing increases in numbers of farms and improved acreage are in the Tennessee Valley and adjacent localities, the Middle Atlantic States, and parts of New England. Gains in numbers of farms are also shown by the Pacific coast and Southwestern States. For example, the 1945 census reports that 625 counties in the regions mentioned have had increases totalling 66,000 farms, or 5 percent over 1940. These counties as a group also show considerable increases in acreage of land in farms, land in crops, and in number of livestock.

By definition the Census enumerates as farms all agricultural enterprises of at least three acres or those with products worth at least \$250. Because of this and because prices for farm products are higher, more farms, many quite small, were enumerated in 1945 than in 1940. But the census data and other information about specific localities indicate more new family-sized farms. On the other hand, farm consolidations and other acreage increases have reduced the number of farms in commercial farming areas where mechanization has made big headway. This is true especially of the North Central States and Northern Plains.

The growth in number of farms in certain sections of the country indicates that there is a place for land improvement in suitable areas of the populous East, South and West to

stabilize and supplement many existing farms which are inadequate, as well as to provide land for part-time farmers near newly-expanded urban centers.

### Developing New Land Costly

But a number of hard facts must be faced by those who hope to drain, or otherwise improve farms. Among these facts is the cost of development compared with values of developed or partly developed farms, the time required to develop a farm, and the inconvenience of living on a new-ground farm.

In order to gain more information on new land development possibilities in the Eastern States, the Department of Agriculture, in cooperation with several Agricultural Experiment Stations and other State agencies, has made surveys which show that the planning and hard work necessary to develop new farms frequently would pay best if applied to existing farms rather than to raw land. These studies describe undeveloped areas suitable for farming which eventually will very likely be developed. But development by drainage, clearing, construction of improvements, and seeding pastures costs money. According to these surveys, to develop fully a farm with a normal value of \$8,000 to \$10,000, in some Eastern States would cost twice that amount at present prices, including both public and private costs. This cost would be prohibitive to most veterans and other prospective new farmers, unless arrangements were made for public investment for drainage and other facilities to be borne through State and Federal loans and direct appropriations.

Therefore, it is suggested that veterans and others yearning to get close to the land first seek the opportunities on existing farms which come up for sale or rent, and on many part-time and subsistence farms which might be converted into economic units through improvement, enlargement, or supplemented by an outside job or income.

However, opportunities exist on well selected new land for hardy people who are willing to undertake the hard work and inconveniences of pioneer living and who have sufficient capital to be reasonably sure of being able to maintain their foothold. Many have been disappointed in what they found and were able to do on new land. Some have lost their savings by paying too much for land, or by improving land which later reverted to mortgage holders. Others have made a success—but not without effort. Success stories are more frequent than failure, but failures are numerous enough to be considered very seriously.

Today the advantage lies with the improved farm properties except in those new land areas where the public decides general welfare justifies the investment of a substantial share of the over-all development costs as it does for certain flood-control and irrigation projects.

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*Postwar Federal Finance and Agriculture.* Tyler F. Haygood. Processed. 31 pp. Bureau of Agricultural Economics. Washington. August 1945.

Discusses farmers' interest in Federal finance, postwar influences affecting Federal finances, reconversion problems, postwar Federal taxation and expenditures, and the Federal debt.

*Let's Talk About Timber Supplies. Is A Timber Shortage Coming?* A Discussion Guide on the question of public regulation of timber-cutting practices to make sure of permanent supplies of wood. DS-26. Printed. 6-page folder. Forest Service. Washington. June 1945.

Has to do mainly with the problem of postwar supplies of timber but is also concerned with the effects of forests in conserving water supplies, regulating stream flow, reducing floods, preventing erosion, harboring wildlife, affording opportunities for recreation, and contributing to scenic beauty.

# What's Ahead in Meat Production?

**W**HEN the lights went out in Europe, meat-animal production in America had fortunately recovered from the low levels of the drought years of the early and middle thirties. Because of its high protein content, meat at that time was soon to become of the utmost importance in meeting the tremendously increased requirements to feed American armed forces and civilians as well as those of many foreign countries. If this recovery had not taken place by that time it is doubtful whether these requirements could have been met in the early part of the war because of the much longer time required to increase meat production compared with many other agricultural products.

In 1939 livestock production had risen to 34.2 billion pounds liveweight, well above the levels of the depression years and even above the previous peak of the late twenties. Then, blessed with ample feed supplies at the beginning and during most of the war together with much better-than-average weather, but many manrower difficulties, farmers and ranchers jumped their output to 40.1 billion pounds on the average for the 5 years 1940-44, and set an all-time record of 46.3 billion pounds in 1943, about one-third higher than the 1939 output. When measured in terms of dressed meat, production increased from an average of 16 billion pounds in 1935-39 to 22 billion in 1940-44.

## Ample Feed Jumped Meat Output

The tremendous war-increase in production of beef, pork, and lamb on the hoof, resulting in new meat production records, was due partly to an accumulation of feed grains and wheat under the ever normal granary program before the war. This reserve of feed made possible a big increase in hog production almost immediately after the war started. Then record and

near-record feed grain crops for the next 5 years permitted a continued large hog production. These large feed supplies also made possible substantial increases in cattle numbers from the 1939 low in the cattle cycle of 66 million head to early 1944 when the total was almost 82 million, an all-time high. Sheepmen held replacement stock from market and built up numbers from 52 million in early 1939 to a high of 57 million at the beginning of 1942. Beginning in 1942, however, with shortages of labor, increased costs of production, more favorable returns from other crop and livestock enterprises and concern over postwar wool prices, sheepmen reduced their sheep holdings sharply until numbers now are 20-25 percent below the 1942 peak.

## Meat-Animal Production on Farms and Ranches, 1925-44

[In billions of pounds liveweight]

	Cattle and calves	Hogs	Sheep and lambs	Total
1925-34 av	13.4	15.4	1.8	30.6
1935-38 av	14.0	12.6	1.9	28.5
1939	15.1	17.1	2.0	34.2
1940	15.4	17.0	2.1	34.7
1941	16.7	17.5	2.3	36.5
1942	18.0	21.1	2.3	41.4
1943	18.7		2.1	40.3
1944	19.0	20.8	2.0	41.8

Good weather for crops was only partly responsible for bumper forage and feed grain crops during the war. Wider use of hybrid seed corn and new oat and sorghum varieties increased yields of these crops substantially. Liberal application of lime and fertilizers also contributed to the large crops. The greater number of farm tractors in use make it possible to plant, cultivate and harvest at the proper time to further assure large harvests. Accelerated declines in horse and mule numbers have released much high-yielding crop and pasture land

for the production of feed for other livestock. And increased conservation practices before and during the war stimulated bigger yields on poorer land. These man-controlled factors have important implications in future feed and livestock production.

Efficiency in livestock production also increased in recent years and received a big stimulus during the war. The number of pigs saved per litter has increased steadily in the past 20 years. Control of disease, better sanitation, use of better brooders have helped increase the percentage of pigs farrowed that reach slaughter weights. Widespread use of protein feed supplements has made possible more efficient pork production. Larger lamb crops and increased yields of wool have resulted from better breeding and husbandry. Larger calf crops and better breeding in beef herds together with better feeding have resulted in a larger beef production per breeding cow.

The possibility of continued 3-billion-bushel-plus corn crops is not improbable with average weather in the future. This has been the size of the crop each year since 1941. This will be conducive to a large production of hogs as hogs normally consume more than half of the nation's corn crop. Corn crops this large would allow for the marketing of 81 million hogs a year at an average weight of 230 pounds, assuming that

the usual proportion of the corn crop was used for feeding hogs and that production of the other feed grains made up about the same proportion of total feed grain production. Slaughter of hogs during 1939-43 averaged 78 million head a year.

With many factors indicating a large meat-animal output for several years, meat production is likely to continue well above prewar for some time. Total meat production averaged 16 billion pounds (dressed meat basis) in 1935-39 and reached a high in 1940-44 of 22 billion pounds on the average. Production probably will continue above 20 billion pounds for several years more. Total cattle numbers are now near the all-time high and, with the probability of lower cattle prices, numbers are likely to decline for several years. The decline in numbers will be accompanied by record or near-record slaughter for the next 2 or 3 years. Pork production will continue relatively large at least through 1946 and with another large corn crop in prospect this year large pork production will follow. However, lamb and mutton production probably will continue relatively low for several years because of the present small total number of sheep on farms and ranches. It will take several years before production is up to prewar. But, lamb and mutton normally account for less than 5 percent of total meat production.

### Meat Supply and Disappearance, 1935-44

(Dressed-meat basis)

	Beginning stocks	Production	Imports	Total supply	Exports <sup>1</sup>	Military purchases	Civilian consumption	
							Total	Per capita
	Billion lb	Billion lb	Billion lb	Billion lb	Billion lb	Billion lb	Billion lb	Pounds
1935-39 av.....	0.6	16.2	0.3	17.1	0.2	---	16.3	126
1940.....	.5	19.0	.2	19.7	.2	---	18.7	141
1941.....	.8	19.5	.3	20.6	.7	0.4	18.9	141
1942.....	.7	21.7	.2	22.6	1.7	2.0	18.2	138
1943.....	.7	24.1	2	25.0	2.5	3.7	17.7	136
1944.....	1.1	24.6	(4)	25.7	1.9	4.0	19.3	150

<sup>1</sup> Includes lend-lease shipments.

<sup>2</sup> 10 million pounds.

The war brought about an increased demand for meat. Incomes of domestic consumers reached record high levels, necessitating meat rationing and distribution controls even though meat consumption per capita in all of the war years, except 1945, was at a comparatively high level. Military and lend-lease requirements greatly increased the total demand for meat.

Feeding the United States armed forces accounted for around 16 percent of the total meat output in the last 5 years. With fewer military personnel to feed in the years ahead, purchases of meat will be sharply reduced. In civilian life the returning servicemen and servicewomen will not consume as much meat per person as they did in the services. In addition, allowance for loss in battle and for special food reserves for the armed forces should no longer be necessary.

#### **From Net Importer to Exporter**

During the war the United States became a net exporter of meat when formerly it was a net importer. While exports during 1935-39 averaged only 197 million pounds, imports during these years averaged 262 million pounds of meat, in addition to 500,000 head of live cattle imported principally from Canada and Mexico. But in 1941-44 over 7 billion pounds were exported. Thus, in 1944 alone the United States exported over 9 times the average of the prewar years.

While shipments of meat to the liberated areas of Europe in the next year or two may be relatively large, it seems improbable that the United States will continue to be an exporter of meat and probably will revert to the old status as a net importer. Canada and Argentina have greatly increased pork production during the war and will give severe competition to this country for the European pork trade. The United Kingdom has agreed to purchase most of Argentina's surplus of meat until October 1, 1948. This will be principally beef but will also include pork. Then too,

the United Kingdom has agreed to purchase most of the exportable surplus of meat from Canada in 1946 and 1947. However, it will likely take several years before the surplus meat producing countries of Europe—Denmark, the Netherlands, and Poland—can increase their meat output and exports to the prewar volume.

Should meat production continue above 20 billion pounds annually for several years, as now seems probable, per capita meat supplies would be 20 to 30 pounds above the average consumption of 1935-39. This assumes that exports and imports would be at the prewar level. Faced with the prospect of a declining export market and much lower military requirements, domestic demand for meat will have to continue strong to prevent declines in prices and incomes to producers. Many remember back to World War I when meat-animal prices dropped about 50 percent from 1919 to 1921.

What the level of livestock prices will be in 1947 or 1948 depends not only on numbers marketed for slaughter but to an even larger extent on the size of consumer purchasing power. With a high level of meat production in prospect but a national income of only 75 billion dollars a year, even though higher than most years prior to 1940, meat-animal prices would be at a depression level. But with full employment and a 150 billion dollar national income, prices probably would be well above parity.

GROVER J. SIMS  
*Bureau of Agricultural Economics*

●  
*Feed Consumption and Marketing Weight of Hogs.* I. Jay Atkinson and John W. Klein. U. S. Dept. Agr. Tech. Bul. 894, 28 pp. Washington. July 1945.

Focuses attention on the findings of experimental studies on hog feeding so that the principles developed in these studies may be applied by farmers in attaining production and marketing goals.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1900-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	58	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	158	151	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	173	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	162	234	139	150	148	212	162	146	171	164
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	325	152	176	170	315	198	174	200	194
1944-September.....	231	320	152	176	170	-----	198	170	200	196
October.....	232	320	152	176	170	325	201	190	201	199
November.....	232	318	152	177	171	-----	203	207	200	202
December.....	232	322	153	178	171	-----	203	211	198	202
1945-January.....	234	322	153	179	172	324	202	199	203	202
February.....	236	320	154	179	172	-----	200	183	209	201
March.....	235	318	154	180	173	-----	198	175	211	200
April.....	230	310	154	180	173	335	194	176	215	201
May.....	226	299	155	180	173	-----	192	179	217	202
June.....	220	301	155	180	173	340	191	189	216	203
July.....	211	286	155	180	173	362	192	197	215	205
August.....	188	-----	154	180	173	-----	195	207	212	206
September.....	-----	-----	-----	181	174	-----	197	201	207	203

Year and month	Index of prices received by farmers (August 1900-July 1914=100)								Parity ratio <sup>1</sup>
	Crops							All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops		
1910-14 average.....	100	101	102	96	98	90	-----	99	100
1915-19 average.....	193	164	167	168	187	125	-----	168	162
1920-24 average.....	147	126	102	189	149	148	143	100	151
1925-29 average.....	140	119	172	145	129	141	140	143	149
1930-34 average.....	70	76	119	74	72	94	106	86	90
1935-39 average.....	94	95	175	83	106	83	102	97	107
1940-44 average.....	123	119	245	131	159	133	172	143	154
1941.....	97	89	159	107	130	85	129	106	124
1942.....	120	111	252	149	172	114	163	142	159
1943.....	148	147	325	160	190	179	245	183	192
1944.....	165	166	354	164	209	215	212	194	195
1944-September.....	155	162	358	170	207	206	196	188	192
October.....	164	161	357	171	211	205	153	187	194
November.....	165	157	308	168	215	195	188	189	196
December.....	167	160	304	168	215	206	228	196	200
1945-January.....	169	163	365	163	214	205	262	200	201
February.....	169	164	360	161	215	211	223	197	199
March.....	171	166	359	163	215	211	203	196	198
April.....	172	162	362	163	215	221	230	204	203
May.....	172	161	363	165	216	227	193	198	200
June.....	173	162	364	169	217	237	269	210	206
July.....	169	161	364	171	221	237	244	207	206
August.....	167	158	367	172	215	214	240	202	204
September.....	167	157	365	175	213	217	159	191	197

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income adjusted for seasonal variation, revised February 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# ANNUAL OUTLOOK ISSUE

# AGRICULTURAL • SITUATION •

NOVEMBER 1945

## A Brief Summary of Economic Conditions

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**T**HE YEAR 1946 promises to be the most significant peacetime year agriculture has seen in a third of a century. Despite reconversion problems in industry, farmers can look forward in the coming year to a strong demand, at good prices, for agricultural prod-

ucts because of large wartime savings, removal of most wartime restrictions, prospective tax reductions, and a high level of exports and foreign relief shipments. Farm prices in 1946 may be slightly below the record 1945 levels, but they are expected to assure farmers a net income double the 1933-39 average and higher than any year prior to 1943. Farmers generally are emerging from the war with an agricultural plant in much better condition than after World War I. Many will resume long-term soil building practices and ease up on the intensive cropping of some of their land, necessitated by war demands.

With the farm mortgage debt the smallest in 30 years and savings the largest in history, farmers generally will enter 1946 in better financial condition than ever before. After years of wartime restrictions, they can look forward to obtaining many things they need and want for their farms and homes. While most farm machinery and supplies are expected to be available in large volume, probably exceeding any year in history, the supply of a great many manufactured goods will not begin to meet all demands before the end of 1946 or well into 1947. Thus with the supply far short of demand, the threat of a serious inflation will not have passed by next year. If farmers and urban people should bid against each other for the scarce goods and shoot prices skyward, there would be disastrous results, especially for farmers.

What the outlook is for industry, for farm prices and income, for the various farm commodities, for the pattern of production, for farm equipment, and for farm family living—as it appeared in mid-October—is outlined in the following summaries, based largely on materials prepared for the Twenty-Third Annual Outlook Conference to be held in Washington.

HOWARD R. TOLLEY, *Chief*  
*Bureau of Agricultural Economics*

## Where We Are Now

ON VJ-DAY the total output of goods and services in the United States was running at a rate just under \$200,000,000,000 per year. The bulk of this output was privately produced, but it also included the payments by Government to its civilian and military employees for their services. The most striking aspects of this total are its size, the fact that at VJ-day almost 40 percent of it—\$78,000,000,000—was still being purchased by

the Federal Government for war; and the fact that in spite of our continuing huge war effort, consumers were getting more than half of the total—\$101,000,000,000 of it. Other Government expenditures of \$14,000,000,000 (less than the prewar total) brought the share purchased by Government above 45 percent of the total. Business purchases of plant and equipment, plus some housing construction, accounted for the remaining \$7,000,000,000.

Civilian employment—not including the purely seasonal summer upswing which will be balanced by the seasonal winter downswing—was 51 million. More than 12 million men and women were in the armed forces, and less than one million were unemployed. The total of the three groups—the total labor force—was 64,100,000.

Where are we now?<sup>1</sup>

### Output, Income Down a Fifth

The Nation is experiencing the most rapid curtailment of markets in history, that is, the tremendous Government buying is being reduced much more than consumer markets are being expanded. Munitions production was about \$43,000,000,000 (annual rate) at VJ-day. By December, \$35,000,000,000 of that output will have come to an abrupt halt, because orders for it have been canceled. Other war expenditures are also declining. As a result, the Nation's total output is falling sharply, and with it the income of American consumers. By early next year, output will probably have fallen by one-fifth, and income by almost one-fifth, from the mid-1945 level.

The country is entering a period during which a torrent of workers will surge onto the civilian labor market from the armed forces. By November net demobilization exceeded 1 million per month. Between VJ-day and the end of June 1946 the armed forces, pressed by Congress and by public demand to rush demobilization, will pour more than 9 million men and women into the civilian labor force. During the same period the munitions industries will release between 6 and 7 million workers, and related industries several million more.

Unemployment is increasing. In early August (before VJ-day), the number seeking work was 830,000, according to the Census Bureau's monthly report on the labor force; during the first week in September it was

1,700,000. This figure is lower than many persons, including the writer, had expected. It is still too early to be sure whether this small unemployment 3 weeks after VJ-day indicates a faster absorption of munitions workers in other work than had been expected, or whether the process of growing unemployment during the transition period is merely taking place a little later than had been expected. The figure excludes persons on strike, on vacation, or only temporarily laid off, but, with due allowance for these qualifications, the reported unemployment figure is a highly encouraging one.

Not all of the persons freed from the armed forces or from war work will seek other jobs. Before VJ-day between 700,000 and 1,000,000 emergency war workers had left the labor force; several million more will probably do so. Some workers will shift from war work to other work without changing jobs or losing a day's pay; by early September 1,500,000 had apparently done so in manufacturing. But unemployment will increase; it can hardly fail to reach 6 million before the end of the winter, and may touch 8 million. Fifteen to twenty million workers—one-fourth to one-third of the working force—may lose one job, and have to seek another. The fact that output will remain high by any prewar standard must not blind people to the maladjustments and economic distress during the period the country is now entering.

### Nearly All Controls Lifted

Wartime controls have been rapidly lifted. Following VJ-day, manpower controls disappeared overnight, as did rationing of gasoline, processed foods, and certain other commodities. Almost all production controls have been lifted other than (a) inventory controls intended to prevent hoarding of scarce materials; (b) controls over the use of tin, rubber, paper, lead, and a limited number of other scarce materials; (c) sufficient control over tex-

<sup>1</sup> This analysis was made in mid-October, 9 weeks after VJ-Day.—EDITOR.

tile production to encourage the production of lower-price garments; (d) controls to limit exports of United States manufactures in scarce supply, controls over imports of key materials in scarce supply such as tin and rubber, and priorities for certain exports to insure that foreign countries can buy minimum amounts of items badly needed for the reconstruction of the shattered economies; (e) a minimum amount of priorities assistance to aid in breaking bottlenecks holding up reconversion. Many rationing controls have been ended, and some price controls have been lifted, but the rationing of sugar, meats, fats, and oils, and price controls over the bulk of consumer goods and over rents must continue until supplies can be increased. Continued wage controls are a necessary accompaniment of price controls.

So rapidly were controls ended that the last remaining ones covering construction were terminated effective October 15, even though the supply of many construction materials is still acutely tight. Supply of these materials must be sharply and speedily increased, or a mad scramble will occur in the spring.

After VJ-day, industrial disputes rose sharply. The causes are complex. Prominent among them is a sharp reduction in the income of wage earners, in many cases to a level whose purchasing power is less than that of the income in 1940 or 1941. It is too early to evaluate the effect of the strikes on reconversion; no evaluation will be attempted here.

### Reconversion Well Under Way

But plant reconversion is well under way. Few data concerning peace production in converted war plants are yet available; but hundreds of individual reports testify to the speed of the change-over.

Yet most goods are still scarce. Hence most price controls are still in effect. Some of the scarcities will be relieved soon. Clothing, for example, should become available in ample sup-

ply sometime during the first quarter of 1946; certain clothing items will be readily obtainable sooner. But most types of metal-using consumer durable goods—automobiles, washing machines, many electrical appliances—will for a longer time appear in stores or salesrooms in too few numbers to satisfy demand.

In many areas, housing will continue to be critically scarce. The population has increased; marriages are on the upswing; members of the armed forces are returning to civilian life; and during the war housing construction has been limited to essential war housing, because of shortages of materials.

### Price Controls Still Needed

Price ceilings upon consumer durable goods will be continued so long as the goods are seriously scarce (or until Congress terminates price-control authority), and controls over house rents will be continued in areas where housing is tight. New construction in 1946 cannot increase the supply sufficiently to meet the demand. Unless checks are applied, 1946 may witness a runaway boom in housing prices in many communities. Available credit controls may not be sufficient; the boom may develop unless Congress grants authority to control the sales price of houses.

The end of the war period found the people with an increase in holdings of cash, bank deposits, and Government bonds, since December 31, 1940, of more than \$140,000,000,000—bringing the total held by the businesses and individuals of the country to about \$215,000,000,000. Of these savings, \$72,000,000,000 are held by corporations and owners of unincorporated businesses for business use, while \$143,000,000,000 are held by consumers.

A good deal of nonsense has been written about this \$143,000,000,000 of cash, deposits, and Government bonds held by consumers. It has been said that the spending coming from these savings will assure perpetual prosper-

ity. It has been held that a large part of them will be spent at once, bringing so great demand for every conceivable kind of goods and services as inevitably to cause inflation.

Certainly these savings will increase consumer expenditures, but the amount of the probable increase can be easily exaggerated. American consumers before the war (at the end of 1940) held idle \$51,000,000,000 of such assets, just as the normal amount of ready savings to have on hand. At higher prices and higher dollar incomes, it is normal to hold more. Little is known about the distribution of these savings between families, but three local surveys, if they are typical of the country, indicate that about one in six families have no savings at all, and that the persons who hold them in large amounts are the same persons who before the war were savers—older persons, wealthier persons, persons with families, persons saving for a specific purpose—not persons who will squander their holdings. It is a fair conclusion that these savings are not going to be spent hastily in such quantities to cause wild inflation, and that they are not going to provide the country with enough expenditures to tide it painlessly over the period of reconversion. However, they will cause

consumer expenditures to be a little greater than would otherwise be the case.

If an inflationary spiral should get under way by ending price controls too soon, the presence of these savings would be a source of danger. People might rush to spend their savings before prices rose further, and this spending might cause prices to soar to disastrous heights. This consideration underlines the necessity of continuing price control so long as goods are in scarce supply.

In summary, the Nation is entering a period bound to be subject to the economic strains and stresses of great change. Deferred demand for many things in short supply (notably housing as well as automobiles, washing machines, refrigerators, sewing machines and similar manufactured goods) makes continuation of price control important. At the same time much unemployment may appear. During this unusual period steps must be taken at once to combat inflation in some sectors, and deflation in other sectors. The very real presence of the first danger does not diminish the importance of the second.

EVERETT E. HAGEN, *Office of War Mobilization and Reconversion*

## Industrial and Business Outlook

**D**URING the coming year of transition from war to peace, the outlook is for a heavy demand for peacetime goods and services at a time when supplies are still restricted. Total production and income will be below the high wartime levels because of the sharp reductions in expenditures for war purposes. Production of civilian goods needs to be increased as rapidly as possible to build up inventories and to supply current and deferred de-

mands, both domestic and foreign. The buying power for making these demands effective already exists or can be readily obtained. And in the meantime, the pressure of demand on the limited supplies will result in rising or firm prices. Speculative buying movements may develop in commodities, real estate and securities.

Broad approximations of the magnitude of general economic developments in the past and of probable de-

velopments during the coming year are indicated in the accompanying chart. The decreases shown on the chart for the late months of 1945 are probably sharper than those which are actually occurring, and the levels actually reached in 1946 are more likely to be above than below those indicated on the chart. At these levels of output, civilian employment will remain close to present levels, but around 6 or 8 million workers will be unemployed during 1946.

From an annual rate of over 100 billion dollars during the peak of the war period, accounting for half of the country's product, Federal Government expenditures for all purposes have declined sharply to an annual rate of about 70 billion in the last quarter of 1945 and are expected to decline to a rate of around 30 billion dollars by the end of 1946 or early 1947.

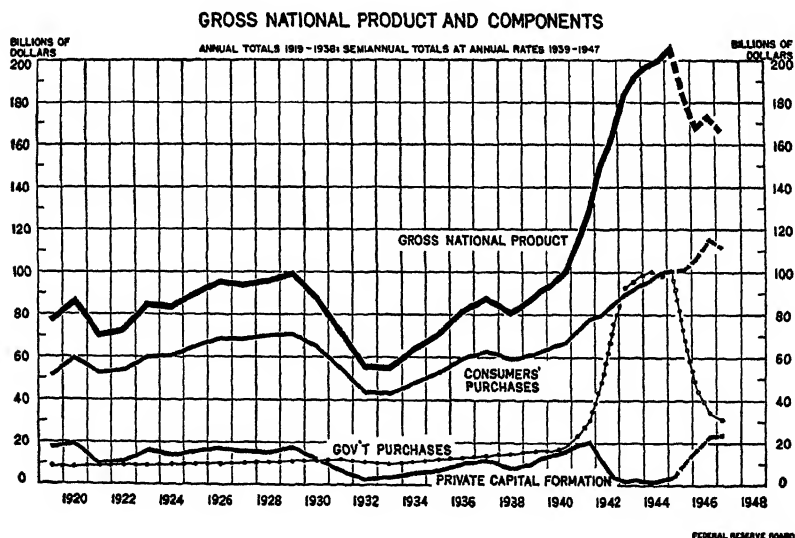
Business expenditures for plant and equipment and to rebuild inventories of civilian goods may be expected to increase for some months about as fast as available supplies permit. The large demand for housing will stimulate construction activity to the limits of capacity, unless speculative price advances and scramble for the limited

supply of materials available hold it back.

Foreign demands for American goods will continue to be heavy during the coming year. Purchases by foreigners financed from their available dollar resources and from credits received in this country may offset to a considerable extent the decline in lend-lease shipments. Exports at an annual rate of 10 billion dollars or more sometime during the next year are not out of the question. While imports are likely to increase some, there will be a substantial net export balance.

Consumer purchases of durable goods, which have been at an exceedingly low level during the war, will expand as rapidly as the new goods become available. Civilian expenditures on services, also limited during the war by manpower scarcity, will increase.

Consumer purchases of nondurable goods have been at a high rate during the war but prices have risen considerably and quantities have been restricted. It is likely that purchases will continue large and they may increase, as additional supplies become available. Purchases will be stimulated by the accumulated deferred de-



mands for many of the scarce goods in this category, such as clothing and tires, and by the shift of many consumers from the armed forces to civilian life. Since early September the value of retail sales of nondurable goods has been about 10 percent above last year's high level.

Total income of individuals has already been reduced a little, because the sharp reduction in Government expenditures has not been fully offset by increases in other sources of incomes. The amount of income available for spending and saving in 1946, after meeting somewhat reduced taxes, is likely to be 10 to 15 billion dollars less than in 1945. Under the circumstances, this decline of less than 10 percent is not large. Because wartime savings have exceeded 40 billion dollars a year, consumers can maintain or increase their purchases, notwithstanding the decline in income, by reducing their savings to more normal levels. Consumer buying can also be increased by drawing on the tremendous accumulated liquid assets or by borrowing. Individual debt was substantially reduced during the war and is now at an exceptionally low level.

### Prices Not Weakening

As yet there is no evidence of weakness in prices and the forces are generally operating toward rising prices of goods and services as well as fixed assets. The building up of inventories, the deferred demands for durable goods by both producers and consumers, foreign needs, and other consumer demands combine into an impressive array of pressures on prices. Demands are especially great for many goods in short supply.

The heavy demand for limited supplies of goods and services may result in higher prices even though there is tremendous capacity for production and increasing numbers of people out of work. The problem of organizing production and distribution so that goods and services are promptly made available to meet the demands is a dif-

ficult one and is already running into serious troubles. The hindrances include differentials in wages between previous jobs and those available, the desire of workers and soldiers to have a rest and look around before settling down, the problems of location of work and workers, the efforts of organized labor and management to obtain adjustments in wages and working conditions involving commitments for an uncertain future, and the difficulties, in the absence of priorities and allocations, of obtaining all materials and equipment needed to expand production. Failure to expand production as rapidly as possible will make the demand pressure more severe.

### Speculative Movements Possible

Speculation in assets of various sorts could easily become serious. The accumulated liquid funds of both individuals and business may seek more profitable investment. Building up of inventories by business could lead to such active speculative bidding for goods as to endanger price controls. While many individuals may view their liquid assets as permanent savings and not use them to purchase consumer goods, they may be anxious to shift to other types of investments, such as securities, or homes, farms, and other real estate. The low capital gains tax and the reduction in the excess profits tax are inducements to such speculation.

In summary, then, the outlook for the next year indicates that during most of the period demands for many goods and services are likely to continue in excess of available supplies. There will be upward pressure on prices for some months, and widespread speculative movements could easily develop in goods, in security markets, and in real estate.

The situation, if it does not get out of hand, could lead to an extended period of high incomes, low unemployment, and stable prices, or it could



lead to a speculative boom followed by a crash. The fundamental long-run problem is to assure a continued demand for all the goods that this country has the capacity to produce and thus to maintain a continued high level of employment. Since this involves a

very great increase over past levels of consumption and investment, the problem cannot be solved "without taking pains." That will require intelligent analysis and guidance.

WOODLIEF THOMAS  
*Federal Reserve Board*

## Farm Demand, Prices and Income in 1946

THE year 1946 will probably witness a high level of demand for farm products even though peacetime readjustments are expected to bring farm prices and incomes somewhat below this year's record highs. Prices of farm products in 1945 averaged about double the 1910-14 base and nearly twice the prewar 1935-39 average. With normal conditions for production in 1946, the readjustments in the first year after the war may result in a reduction in cash receipts from marketings below 1945, but probably by not more than about 10 to 15 percent. Since the prices of some non-farm products may advance, the prices farmers pay probably will not decline as much as the prices they receive for their products. The net income of farmers might decline by as much as 15 percent, but this would still be more than double the prewar average and higher than in any year prior to 1943, including the peak years immediately following World War I.

Cutbacks in national expenditures for war materials are reducing national income, but by the middle of 1946 reconversion will have reached the point at which national production may begin to expand, with increasing employment. National income for the year may be reduced from the high level of 1945, but perhaps by not more than 15 percent.

Consumer purchasing power will not be affected as much as national income by the cutbacks in war production. If taxes are reduced, this will leave a larger proportion of cur-

rent incomes at the disposal of consumers. Furthermore, consumers may reduce current savings and use some of their accumulated savings to purchase goods and services, so that the actual current expenditures may be little affected by the curtailment in national income. In fact, total expenditures for consumer goods and services in 1946 are likely to be larger than in 1945.

Total civilian purchases of farm products will be increased by returning soldiers, by the removal of restrictions upon consumption, and, in the case of textiles, simply by converting more of the raw material into civilian goods for which there is a waiting demand. The curtailment of military purchases of most products will be offset largely, if not entirely, by expanding civilian requirements and increased purchases for relief and export. In some cases the supplies released by the reduction or disappearance of special military requirements will be absorbed only at lower prices.

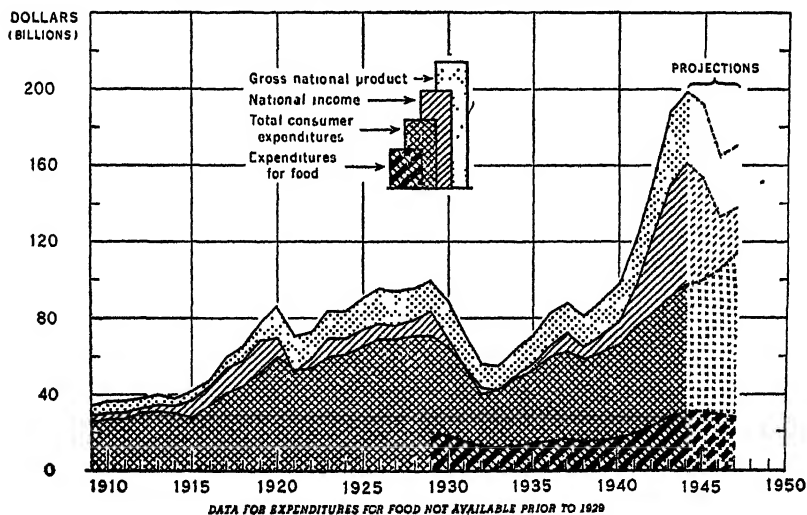
Relief takings and exports of farm products in 1946 will be large if adequate financial arrangements are provided. The need exists and arrangements have been made already to move a considerable volume in the next few months. Wheat is moving in large volume and the exports of cotton are likely to increase. The takings of some products may decline in the latter part of the year, especially if good crops are harvested in Europe and other exporting countries.

The volume of exports of farm products depends largely on the availability of purchasing power or ways and means of financing the takings by foreign consumers. The need exists for about all the food the country can spare, but the termination of lend-lease makes it necessary to provide other means of financing. While some countries are already prepared to buy, the takings of others depend on loans to be negotiated through the Export-Import Bank or otherwise. Relief purchases on UNRRA account also will be an important factor in exports. In the past 2 years lend-lease shipments and commercial exports of food have amounted to about 8 percent of the total food distribution. The value of these exports has exceeded 2 billion dollars of which about 80 percent was shipped under lend-lease. While the exports of some items may decline and the takings of some countries, particularly Russia, probably will be reduced, total exports are likely to be increased by larger shipments of wheat and cotton, provided suitable financing is arranged.

War conditions have reduced farm production in most of the areas directly affected by military operations, and the ending of these operations opens up a wider area for the distribution of the farm products of the United States. Crop and livestock production are short in Europe, so that the minimum import requirements are much greater than usual. The Orient also needs additional foodstuffs. Drought in many Southern Hemisphere countries and transportation difficulties make it practically impossible for any significant quantities of foodstuffs to be furnished from the surplus-producing countries other than Canada and the United States.

Conditions are favorable for exporting more wheat in the current marketing season than has been shipped from the United States in any one year since the 1920-21 season—probably as much as 425 million bushels could be spared, if provisions were made for paying for it. Estimates of requirements of bread grains by deficit areas add up to over 800 million bushels. This amount could be supplied from

EXPENDITURES FOR FOOD, TOTAL CONSUMER EXPENDITURES, NATIONAL INCOME, AND GROSS NATIONAL PRODUCT, UNITED STATES, 1909-44 AND PROJECTIONS FOR 1945-47



## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Oct. 15 1944	Sept. 15, 1945	Oct. 15, 1945	Parity price, Oct. 15, 1945
	August 1909- July 1914	January 1935- December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.42	1.45	1.51	1.55
Rice (bushel).....do.....	.813	.742	1.77	1.67	1.79	1.42
Corn (bushel).....do.....	.642	.691	1.13	1.12	1.13	1.12
Oats (bushel).....do.....	.399	.340	.659	.583	.628	.698
Hay (ton).....do.....	11.87	8.87	15.20	14.30	14.30	20.80
Cotton (pound).....cents.....	12.4	10.34	21.25	21.72	22.30	21.70
Soybeans (bushel).....dollars..	2.96	.954	2.04	2.07	2.06	1.63
Peanuts (pound).....cents.....	4.8	3.55	7.71	8.29	8.06	8.40
Potatoes (bushel).....dollars..	.097	.717	1.41	1.38	1.26	1.28
Apples (bushel).....do.....	.96	.90	2.05	2.84	2.84	1.63
Oranges on tree, per box.....do.....	1.81	1.11	2.70	2.12	2.05	2.06
Hogs (hundredweight).....do.....	7.27	8.38	13.80	14.10	14.10	12.70
Beef cattle (hundredweight).....do.....	5.42	6.56	9.71	12.00	11.40	9.48
Veal calves (hundredweight).....do.....	6.75	7.80	12.20	13.40	13.40	11.80
Lambs (hundredweight).....do.....	5.83	7.79	12.10	12.40	12.60	10.80
Butterfat (pound).....cents.....	20.3	29.1	50.3	50.3	50.2	47.5
Milk, wholesale (100-pound).....dollars..	1.60	1.81	13.32	3.20	3.28	2.90
Chickens (pound).....cents.....	11.4	14.9	23.8	27.5	24.3	20.0
Eggs (dozen).....do.....	21.5	21.7	38.8	39.6	42.6	43.6
Wool (pound).....do.....	18.3	23.8	41.6	41.4	41.1	32.0

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

the United States, Canada, Argentina, and Australia. It is doubtful that conditions will permit the movement of so much wheat in the current marketing season, but at any rate the domestic stocks of wheat are likely to be pulled down to moderate levels at the end of the year, and the foreign needs in the next marketing season may continue at a high level.

An opportunity is now offered to export considerable quantities of cotton. Many countries need cotton to resume mill operations and to meet deferred requirements for textiles. Relatively large shipments to Spain in the past year indicate the possibilities of shipments to many other European countries. The provision in the Surplus Property Act for financing the exports of cotton should facilitate the placing of American cotton back in the mills of many foreign countries. Undoubtedly large quantities of tobacco also can be exported with suitable financing arrangements.

However, the opportunity for exporting large quantities of many farm

products will be reduced in the course of the next 2 or 3 years, just as it was after the First World War.

### Farm Prices

Farm prices generally are likely to remain firm until the new 1946 crops begin to come in. In fact, if ceilings were abandoned or raised on some items, the index might rise above the level of this fall. The downward adjustment in the prices of potatoes and truck crops early this fall is an example of seasonal reductions to lower levels that may be expected from time to time in the next 2 years. Possibly the prices of potatoes and truck crops will stabilize not far below present levels. As the fresh crops of winter vegetables come to market, there may be some further decline in prices. Larger fruit crops will bring lower prices. If the 1946 wheat and feed crops turn out to be as large as those of 1945, the prices of these crops may adjust to lower levels as the harvest season approaches. The prices of the fats and oils crops are likely to de-

cline if, and as, significant volumes of imports come in. Prices of livestock and livestock products may be well sustained by strong demands for these products, while prices of eggs and of some dairy products may decline moderately in the season of heaviest production.

Prices received by farmers have declined from the high level reached early this summer, and in 1946 are likely to average moderately lower than in 1945, but not more than 10 percent lower. The prices of fruits, vegetables, truck crops, and eggs may decline somewhat more than those of other farm products. Since relief and export takings of farm products are likely to be smaller in the second half of the year, the prices of most farm products may decline more in that time, especially if crop yields are high in foreign countries as well as in the United States.

There have been some slight increases in prices paid during the past year for clothing, furniture and building materials, but livestock feed prices are slightly lower than in 1944. The prices-paid index may decline only slightly in the second half of 1946.

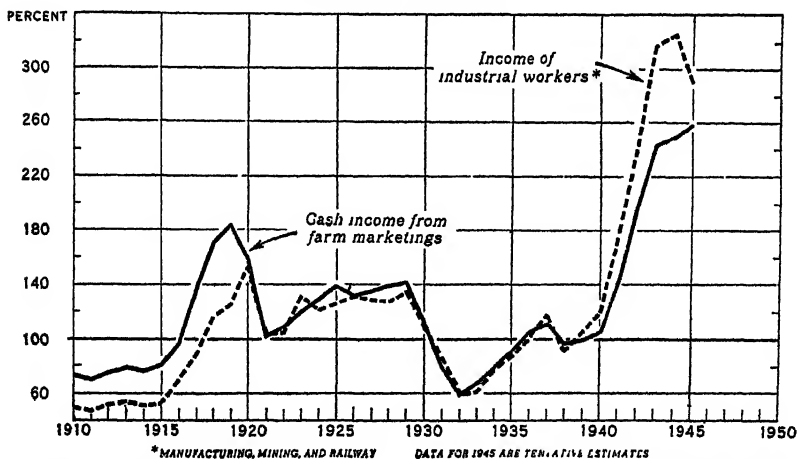
Prices paid for seed, purchased food, and livestock feed may decline as the prices of farm products are reduced. These items contribute 20 percent of the total value of the index. Interest and taxes, which make up 14 percent of the index, probably will show little change. Prices of such articles as automobiles, tractors, other farm machinery and building materials may average higher in 1946.

The ratio of prices received to prices paid, interest and taxes averaged 117 for the first 9 months of 1945. Since the prospective decline in prices received is somewhat larger than that in prices paid, the ratio may be moderately lower in 1946, particularly in the second half. Farm prices, however, are expected to average above parity next year.

Government support of the prices of basic commodities and of other commodities upon which commitments have been made will check but not prevent a decline in the average of the prices of farm products. Wartime demand has maintained the prices of many products considerably above support levels.

#### CASH INCOME FROM FARM MARKETINGS, AND INCOME OF INDUSTRIAL WORKERS, UNITED STATES, 1910-45

INDEX NUMBERS (1935-39=100)



Gross farm income, cash receipts, production expenses, and net income to farm operators which began to rise in 1938 reached a peak in 1945. Some recession is expected next year.

Assuming only average crop production in 1946, total crop marketings next year will probably be less than in 1945. Total cash receipts in 1946, including Government payments, may be about 19 billion dollars, approximately 10 percent below 1945.

In 1945 total cash receipts from farm marketings probably will be about 20.4 billion dollars, 3 percent above 1944. Government payments are expected to be about the same

Production expenses probably will reach a peak in 1945 and decline in 1946. An increase of nearly 5 percent in expenses in 1945 over 1944 may be followed by a slight drop in 1946. Costs of hired labor probably will rise this year over last year as wage rates are increasing, but there may be a slight decline in expense for hired labor in 1946.

Charges for maintenance and depreciation will be high in 1945, but probably will be higher still in 1946 as greater supplies of available motor vehicles and other farm equipment provide greater opportunities for replacing outworn and outmoded implements.

Expenditures for feed purchased may decline in 1946 as numbers of livestock to be fed and prices paid for feed probably will decrease somewhat.

Property taxes may increase in 1945 slightly but are not expected to show much change in 1946. Charges for farm mortgage interest probably will be about the same in 1945 and 1946 as in 1944.

Gross income—the sum of cash receipts from farm marketings, Government payments, value of products consumed in farm homes and rental value of farm dwellings—probably will amount to around 24.2 billion dollars in 1945, followed by a decline of 5 to 10 percent in 1946.

After deducting expenses from gross income, the realized net income to farm operators in 1945 probably will exceed 1944 by about 3 percent to register almost 13 billion dollars. In 1946 net income may recede as much as 15 percent. Government payments, which are included in these net income estimates, will be about 0.8 billion dollars in 1945, about the same as in 1944, but may decrease 10 to 15 percent in 1946.

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## FOOD SUPPLIES

CIVILIAN food supplies in 1946 will be much improved over 1945, permitting a civilian consumption per capita 11 percent or more above the prewar average though probably slightly below full consumer demand for the year as a whole. The improved supply situation is expected to result in retail food prices about 5 percent below the average for 1945.

Civilian supplies of some foods probably will continue short of demand at ceiling prices during the early part of the year, but by summer only sugar and some fats and oils may be short.

The gap between over-all supply and over-all demand for food will be narrower in 1946 than in the past 2 or 3 years. Total food supplies will still be short of total demand unless food production, on the one hand, should continue at the record high of 1944 and 1945, or demand, on the other should fall more than 10 percent below this year's level.

Military need for food in 1946 is now expected to be  $\frac{1}{4}$  to  $\frac{1}{3}$  below 1945 procurement for both the armed forces and military relief feeding. A substantial part of the cutbacks in military purchases will accrue to American civilians, but these cutbacks will also permit an increase in the quantities to be exported—particularly in the period October 1945 to July 1946.

If financial arrangements can be made, 8 to 10 percent of the total United States food supply might be exported in 1946, including shipments to U. S. territories, commercial exports, and UNRRA shipments.

# Civilian Consumption of Principal Foods, 1935-39 Average, 1911 and 1915

Food group	Consumption per capita in pounds		
	1935-39 average	1911	1915
Red meats.....	126	150	130
Poultry meats.....	21	27	20
Eggs.....	298	351	300
Fluid milk and cream.....	340	423	438
Cheese.....	5.5	5.0	5.7
Butter.....	17	12	11
Fats and oils.....	31	33	31
Fresh fruits.....	134	115	146
Processed fruits.....	26	27	31
Fresh vegetables.....	235	251	261
Processed vegetables.....	32	35	41
Potatoes, sweetpotatoes.....	153	117	151
Sugar.....	97	89	73
Corn products.....	39	46	47
Wheat flour.....	153	161	161
Coffee.....	14	16	..
Ted.....	0.7	0.5	0.7
Cocoa.....	4.1	3.6	3.9

<sup>1</sup> Number, not pounds.

<sup>2</sup> Excludes butter.

<sup>3</sup> Pack year.

Meat supplies for civilians in 1946 may average 145 to 155 pounds per capita, annual rate — wholesale dressed weight—until fall when they will increase seasonally. Civilian per capita consumption in 1935-39 was 126 pounds—in 1914, 150 pounds. Fish will be relatively plentiful although canned fish supplies will be smaller than prewar until summer. Egg supplies for civilians will be so large as to meet full demand at substantially lower prices. Civilians will benefit from the large reduction in military procurement of chicken and turkey.

With the exception of butter, supplies of dairy products are expected to be well in line with consumer demand during 1946. Ample quantities of fluid milk and cream, canned milk,

and ice cream will be available as well as good supplies of cheese for most of the year and more butter than in 1945. Further improvement in the fats and oils situation in the latter part of 1946 depends largely on imports.

The supply of fruits, vegetables, and grain products for civilians will continue to be ample. Supplies of both fresh and canned fruits and vegetables, except for apples, will be large. There will also be plenty of potatoes and sweetpotatoes and most grain products, with the exception of rice and those requiring large amounts of fats and oils and sugar.

MARGUERITE C. BURK, DAE

## LIVESTOCK

**M** EAT production in 1946, about the same as 1945, will be about 2 billion pounds less than the 1944 record output of over 24½ billion pounds (dressed meat basis), but over 6 billion pounds more than average production in 1935-39.

At the prospective level of consumer expenditures in 1946, the meat supply will be about in balance with demand, at 1945 retail prices.

The 1946 requirements for meat by the armed forces and for export will be substantially below the 1945 total of about 6 billion pounds. Because of reduced meat-animal production, European imports from this country for the next 2 or 3 years, though smaller than in 1942-45, probably will be large compared with prewar.

## Hogs

Pork production for 1946 as a whole may be moderately greater than the 10 billion-pound output indicated for 1945. The total number of hogs slaughtered in 1946 will be increased somewhat, partly because of delayed

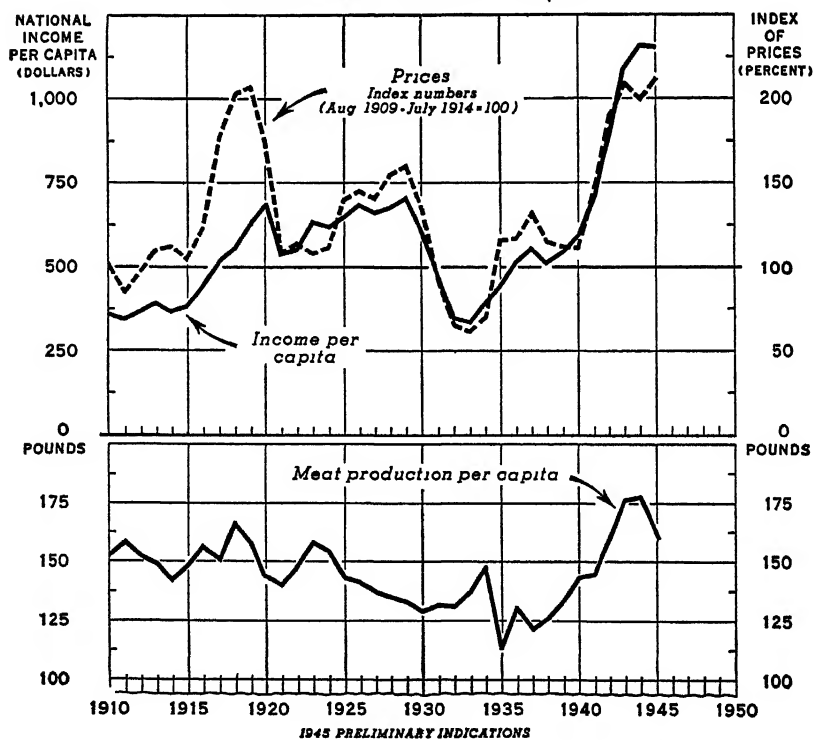
marketings of 1945 spring pigs. Hog marketings will be materially greater in the late spring and early summer of 1946 because of an increase in the 1945 fall pig crop. Weight of hogs marketed, however, may not reach the record weights of 1945 when both heavy and medium hogs sold at the same price per pound under ceilings.

The total pig crop of 1945 will be about the same as the 87 million in 1944. The hog-corn price ratio has been moderately above the long-time average throughout 1945, but it is not particularly favorable for an increase in the 1946 spring pig crop in view of the high returns from other livestock enterprises, particularly dairy production. Current indications point to a 1946 spring pig crop not greatly differ-

ent from the 52 million saved last spring.

Hog prices in 1946 probably will average moderately lower than in 1915, when prices were at ceilings for most of the year. Hog prices may fall below current levels during the winter when marketings of spring pigs are largest and again in the late spring when marketings of 1945 fall pigs are at a peak. If the 1946 spring pig crop is no larger than the 1945 crop, pork prices in the latter part of 1946 probably will be at about the same level as in the latter part of 1945 when prices were at ceilings. However, appropriations have only been made for the payment of the hog slaughter subsidy until June 30, 1946. If the slaughter subsidy amounting

PRICE RECEIVED BY FARMERS FOR MEAT ANIMALS, NATIONAL INCOME PER CAPITA, AND MEAT PRODUCTION PER CAPITA, UNITED STATES, 1910-45



to \$1.70 per 100 pounds, is withdrawn after mid-1946, hog prices probably would be reduced by an amount approximately equal to the subsidy.

Exports of pork and lard to Europe in the next 2 or 3 years probably will be materially larger than the low level of 1935-39, although below 1942-45 when substantial shipments were made through lend-lease. Increased hog production in Canada, Argentina, and Australia will result in more intense competition for the European market than in prewar. But it will take several years before hog production in Europe, which was reduced more than one-third during the war, will be up to prewar. World hog numbers at the beginning of 1945 were 10 percent below prewar.

### **Beef Cattle**

Cattle slaughter, at unprecedented levels in 1944 and 1945, is expected to continue high through 1947 at least. The number of cattle on farms has declined only moderately since the January 1, 1944 peak of 82.4 million head and breeding herd; are still very large. Hence slaughter is likely to continue at or near record levels in 1946. But prospective lower cattle prices, together with the distinct possibility that forage and range conditions will not continue so consistently favorable as in recent years, mean that cattle numbers probably will decline at an accelerated rate beginning in 1946 or 1947. This will be accompanied by a fairly heavy slaughter of breeding stock in addition to marketings of beef steers and heifers from current output. Hence, though the size of the annual calf crop will be declining, total marketings of cattle and calves are likely to continue large for another 2 or 3 years at least.

Unit returns to cattle producers in 1946 will be lower than in 1945. Beef prices, governed by price ceilings in 1945, are likely to be maintained close to present levels. However, if price ceilings are removed, prices of the better grades of beef probably would ad-

vance. Consumer expenditures for food in 1946 will not be much less than in 1945 and with a comparatively large proportion of the population receiving relatively high incomes, demand for the better grades of beef will continue exceptionally strong. But prices of lower-grade beef may weaken, as large supplies of such beef will become available.

A major factor influencing returns to cattle producers in 1946 will be the way in which subsidies and price control regulations are handled. Subsidy payments to slaughterers and direct payments to farmers and ranchers are authorized through June 1946. If the slaughter subsidy is withdrawn in 1946 prices of lower-grade cattle probably would be reduced, even if ceiling prices on beef were raised, or removed, since prices of lower-grade beef are not likely to advance. However, for higher grade cattle the withdrawal of the subsidies probably would be only partly reflected in lower prices to producers, as prices of better grade beef would tend to advance if ceilings were raised.

### **Sheep and Lambs**

Sheep numbers, at a peak of almost 57 million head at the beginning of 1942, will be 20 to 25 percent less at the beginning of 1946, because of the continued decline during the war. The rate of decline in sheep numbers in 1946 probably will be reduced as the farm labor supply increases. Also direct subsidies to producers on slaughter lambs beginning in August 1945 to continue through June 1946 will more nearly equalize returns from lambs and wool with those from other farm enterprises.

The 1946 lamb crop is likely to fall below 1945, reflecting the smaller number of ewes that will be on farms and ranches next winter and spring. Output of lamb and mutton will be below all of the war years because of the smaller lamb crop, a probable reduction in ewe slaughter, and the possibility that producers will save a larger



number of ewe lambs for herd replacements next fall.

With smaller marketings in prospect, unit returns from sales of lambs and sheep, including subsidy payments, probably will average higher during the first half of 1946 than in the same period of 1945. Prices of lambs and sheep probably will decline less than seasonally in the summer and early fall next year. However, if subsidy payments to producers are withdrawn, unit returns from sales of sheep and lambs in the second half of 1946 probably will be moderately lower than in the same period of 1945.

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## DAIRY PRODUCTS

**R**ETURNS to dairy farmers during 1946 will be moderately lower than in 1945. The level of returns is contingent in part on Government actions on dairy production payments and on processor subsidies on cheese. In 1945 cash receipts from dairy products, including dairy production payments, will be over 3.5 billion dollars. Dairy production payment rates have been announced through the first quarter of 1946 and financial arrangements have been made through June 30. Funds for payments of processor subsidies have been made available through June 30.

The 1946 supply of dairy products, except for butter, will be reasonably well in balance with demand, at an average price for whole milk slightly below 1945 assuming price ceilings, particularly for butter, continue at current levels. Butter supplies, even at the increased retail ceilings, will be below potential demand for most of 1946 so that butterfat prices will be about unchanged and will tend to maintain whole milk prices. However, removal of the 3.75 cents per pound processor subsidy on cheese probably would affect cheese prices very little, but prices received by farmers for whole milk in cheese areas

probably will decline in 1946. The supply of cheese is expected to be adequate to meet the 1946 demand at about present prices.

Despite decreases in the output of whole milk products, the quantity of milk available for creamery butter production probably will be only moderately above that of 1945. Supplies of creamery butter during 1946, though above the extremely low level of 1945, will be substantially below the pre-war level of 17 pounds per person.

Milk production during 1946 is expected to be 1 to 3 percent below the all-time peak reached in 1945, now indicated at 123 billion pounds. The number of milk cows on farms in June was 2 percent below that of 1944. The ratio of heifer calves per hundred cows on January 1, 1945, was 23.7 compared with 25.5 on January 1, 1944. This is replacement stock for 1946 dairy herds. Hence, the number of milk cows on farms in 1946 probably will be smaller than in 1945. Also, the record milk production per cow of almost 4,800 pounds expected for 1945, will not continue in 1946 if only average weather prevails. This high level of production per cow was a reflection of record unit returns, in part due to dairy production payments, and excellent pasture conditions. If dairy production payments are completely terminated after June 30, 1946, the decline in milk production per cow probably will be accelerated.

Total sales of fluid milk and cream in 1946 probably will not differ much from 1945. However, production of whole milk manufactured products (cheese, canned milk, dried whole milk) probably will decline from the record levels achieved in 1945 because of the reductions in noncivilian takings. Civilian supplies of such products probably will be at or near record levels. Noncivilian takings have accounted for about 30 percent of the cheese supply and 25 percent of the canned milk production.

GERSON LEVIN, BAE

## POULTRY AND EGGS

**P**RICES received by farmers for eggs in 1946 are expected to be at or near support levels in contrast to most of 1945 when egg prices were at or near ceilings. The extent of the decline will depend chiefly on export demand. This radical change in the price situation will be due in a large part to increased civilian supplies of red meat (for which eggs have been an important substitute during the war), and to a minor extent on the reduction in noncivilian takings and declines in consumer purchasing power. Declines are expected to be especially pronounced in the Midwest where the reduction in processing activities will affect returns to producers of lower grade eggs.

Farm egg production in 1946 probably will be slightly below the indicated 4.6 million dozen produced in 1945. Domestic supplies and demand for eggs at support prices would be about in balance in 1946 if the equivalent of 100 to 600 million dozen eggs were exported.

Prices received by farmers for turkeys and chickens probably will decline from the all-time peaks reached in 1945, reflecting reduced noncivilian takings and increased supplies of red meat. However, such declines are expected to be only moderate since the high level of consumer purchasing power, though below that of 1945, will tend to keep the demand for poultry meat fairly strong and probably will sustain prices.

Production of farm chicken meat in 1946 may not be much different than in 1945. Although the number of chickens raised in 1946 probably will show significant declines from the 1945 level, heavy flock culling because of prospective lower egg prices will be an offsetting supply factor. Also, commercial broiler production which has made outstanding gains within the last few years may be reduced somewhat in 1946 from current levels.

In the long run, however, if purchasing power continues above prewar, per capita consumption of chicken may continue well above the prewar level of 18 pounds. In addition to the effects of a higher level of income, more efficient techniques in broiler production and improvements in marketing methods will contribute to a well sustained supply and large consumption of chicken. The trend in broiler production is likely to continue upward though at a decreasing rate than in recent years.

Turkey meat production in 1946 may not differ much from 1945. Favorable returns for the past 2 years and ample feed supplies probably will keep turkey production near the high level reached in 1945, when production was over 14 million birds, 22 percent above 1944 and almost double the prewar average. Civilian turkey consumption is expected to continue its upward trend, retarded during the war because of large army procurement. In 1945 per capita consumption will be about 4.5 pounds, almost double the 2.6 pounds consumed in 1937-39.

GERSON LEVIN, BAE

## FEED

**F**OR the ninth consecutive season feed production has been large. Supplies of both forage crops and feed grains for the 1945-46 season are above average and, except in limited areas, are ample to meet the expected livestock requirements. Supplies of feed concentrates per animal unit for the 1945-46 season are slightly smaller, on the basis of October 1 indications, than the relatively large supplies in 1944-45. Demand for livestock feed may not be quite so strong as in 1944-45, because of somewhat lower returns to some livestock producers. In 1945-46 prices of feed grains, except oats, probably will average about the same as in the season just ended.

Total supplies of feed concentrates for the 1945-46 season, including feed

grains, byproduct feeds, and wheat and rye for feed, are about 180 million tons. This would be slightly smaller than a year earlier, but larger than average. Considerably less wheat will be fed in 1945-46 than a year earlier, and imports of oats and barley will be materially smaller, so that the actual supply of grain for livestock is slightly smaller than a year ago. The total supply of high-protein and other byproduct feeds also is expected to be slightly smaller than the record supplies in 1944-45.

Total livestock numbers are expected to be about the same next January 1 as a year earlier, but some decrease may take place during 1946.

#### Feed Balance, 1938-45, Year Beginning October 1

Item	1938-42 aver- age	1944	1945 <sup>1</sup>
Stocks, beginning crop year <sup>2</sup> .....	Mil. tons 20.1	Mil. tons 10.7	Mil. tons 14.2
<b>SUPPLY</b>			
Feed grain production:			
Corn.....	75.1	90.4	80.2
Oats.....	18.8	18.7	25.3
Barley.....	7.9	6.8	6.7
Sorghum grains.....	2.4	5.1	2.9
Total production.....	103.9	121.0	121.1
Other grains and byproduct feeds for feed.....	23.0	29.8	24.7
Total supply.....	147.0	161.5	160.0
<b>UTILIZATION</b>			
Feed grains and other grains fed.....	98.9	112.9	-----
Byproduct feeds fed.....	16.3	19.5	-----
Total concentrates fed.....	114.9	132.4	132.0
Feed grains for food, seed, industry and export.....	11.7	14.7	14.0
Total utilization.....	126.9	147.1	146.0
Total utilization adjusted to crop-year basis.....	126.5	147.3	-----
Stocks, end of crop year <sup>2</sup> .....	20.5	14.2	14.0
Number of grain-consuming animal units on the following January 1.....	Mil. 140.3	Mil. 147.0	Mil. 147.0
Supply of all concentrates per animal unit.....	Tons 1.05	Tons 1.10	Tons 1.09

<sup>1</sup> Preliminary.

<sup>2</sup> Stocks of corn Oct. 1, oats July 1, barley June 1, sorghum stocks not reported. Includes stocks on farms, at terminal markets, and in CCC bins.

Feeding rates are likely to continue at a high level during 1945-46, although probably not so high as in 1944-45. Even with a somewhat lower rate of feeding, and a slightly smaller livestock output in 1945-46 it is likely that the corn and barley carry-overs at the end of 1945-46 will be reduced below the levels reached at the end of 1944-45. Carry-over of oats next year, on the other hand, probably will be larger next year because of the very large production in 1945.

The supply of hay for the 1945-46 season is one of the largest on record. In relation to the livestock to be fed, the supply is the largest in nearly 20 years. Hay supplies are larger in all regions of the country than a year ago and hay prices in 1945-46 probably will average slightly lower than in 1944-45.

#### Feed Utilization

Demand for livestock feed, particularly poultry and dairy feeds, may not be so strong in 1945-46 as a year earlier. Somewhat lower returns are in prospect for some livestock producers, and there may be some reduction in numbers of livestock in 1946. Partly offsetting the prospective decreased demand for livestock feed are indicated increases in exports of feed grains and some byproduct feeds. Increases also are indicated in utilization of corn for production of corn sugar, corn sirup, and possibly alcoholic beverages, but total quantities of feed grain utilized for food and industrial purposes may be slightly less than in 1944-45.

Greater quantities of oats probably will be fed or otherwise utilized in 1945-46 than in most other years because of the very large supplies on hand, and because of shorter supplies of other feed grains and less wheat available for feed.

Livestock producers in some deficit feed areas, and processors may encounter some difficulties again this season in obtaining desired supplies of corn. Smaller quantities of corn probably will be marketed during the next

12 months than during the past season despite the strong commercial demand that is indicated. A larger-than-usual proportion of this year's crop is in silage and forage, and a larger-than-usual quantity of grain is reported to be soft. Killing frosts occurred in some important producing areas before the crop was fully mature. However, much of the poor quality corn is in areas where it can be fed, so that loss from spoilage and waste is not expected to assume serious proportions.

### Regional Supplies

Total corn supplies are larger than a year ago in the Eastern Corn Belt States, but are considerably smaller in the Western Corn Belt where livestock production has increased the most in recent years. However, supplies in the latter region are larger than average this year. More corn is on hand in the South Atlantic and South Central regions than a year ago, and less corn probably will be required from "surplus" producing regions than last year.

With a considerable reduction in the quantity of wheat to be fed in the North Atlantic States in 1945-46, larger quantities of corn and oats will be needed in that area than were shipped in last season. Larger quantities of locally produced oats and slightly more corn on hand than last year will partially offset the increased requirements of feed grains from other areas.

Supplies of feed grain in the Western States are slightly under those of a year ago, but reductions in numbers of livestock would offset the reduced supply on hand. About the same quantities of feed grain will be needed to be shipped to the Western States in 1945-46 as last season.

R. A. PHILLIPS, BAE

## FOOD GRAINS

**S**UPPLIES of wheat and rice in 1946-47 are expected to be plentiful but rye may continue relatively short.

Compared with the current year, rye and wheat prices are expected to average slightly lower, and rice considerably lower.

### Wheat

Large export demand for wheat is expected to hold prices generally at about ceiling levels for most of the remainder of the current marketing year. For the 1946 crop prices may be only moderately lower, unless yields per acre in this and other important producing countries are very large. Present law provides price-support loans to cooperating farmers at 90 percent of parity on wheat harvested within two full calendar years after the formal termination of hostilities, provided that producers have not disapproved of marketing quotas. Should prices average only at the 90 percent support level in 1946-47, they would probably be between 10 and 15 percent below the current year. However, this would still be above prices in any of the 17 years between 1925 and 1943.

Under present conditions, farmers undoubtedly will plant a wheat acreage for harvest in 1946 at least equal to that seeded for the 1945 crop. The 1946 goals established by State committees add up to 68.9 million acres for the country as a whole, which is practically the same as was seeded for the 1945 crop. With average yields, this acreage would produce a crop of about 96.0 million bushels. This, with stocks on July 1, 1946, of about 300 million bushels, would provide for domestic requirements and leave about 400 million bushels for export and carry-over at the end of the 1946-47 year. If Canada and the Southern Hemisphere countries have good crops, exports from the United States probably would not exceed 100 million bushels, which would leave a carry-over of about 300 million bushels on July 1, 1947.

Conditions in the United States are conducive to maintaining wheat acreage at around current levels for the next year or two. However, if a relatively large wheat acreage is main-

tained for several years, this country will again be faced with a difficult disposal problem.

## Rye

With the likelihood that the acreage for rye grain will not be expanded adequately to fully meet requirements, rye prices in 1946-47 are expected to average about the same relatively high level as in the current marketing year.

Rye disappearance in 1945-46 is expected to exceed the size of the 1945 crop and reduce the carry-over July 1, 1946 to between 6 and 7 million bushels which is considerably below average and compares with 13 million bushels on July 1, 1945.

The acreage of rye for harvest in 1946 is expected to approximate the State rye goals for 1946 which total 2.6 million acres. This would be about a fourth larger than the 2.1 million acres harvested in 1945. Assuming average yields of 12.2 bushels per acre, an acreage of this size would produce a crop of 31.4 million bushels. Additional rye production could be readily used for animal feed, distilled spirits and exports, but it is not likely that the acreage could be further expanded to obtain significant additional supplies. The acreage for grain has been declining in the important commercial rye-producing States since wheat restrictions were removed. The only likely increases are minor and are in other States, where they would be largely absorbed for livestock feed.

## Rice

There is a strong demand for rice produced in the United States until the oriental supply begins to move freely. The first rice crop in oriental surplus-producing countries to be planted after the war, with minor exceptions, will be harvested beginning in November 1946. This is later than the harvest in August in the United States, and assuming financial arrangements are made, should provide an opportunity for this country to continue substantial exports in the early

months of the 1946-47 marketing year. If it were not for this early-season demand, exports and shipments would be expected to decline to about the pre-war level of 23 million bushels.

With about 28 million bushels needed for food in the United States and 4 million for seed and feed, the annual disappearance rate following the war would be only about 55 million bushels. With average yields of 47 bushels, this could be produced on 1.17 million acres. While such an acreage would be about 6 percent above the 1934-43 average of 1.10 million acres, it would be 23 percent below the record high level of 1.51 million acres in 1945. The early 1946-47 foreign demand will probably bring United States exports and shipments above the 23-million-bushel peacetime level.

As in the case of wheat, price-support loans to cooperating farmers are provided at 90 percent of parity in the 2 years following the formal termination of hostilities. Should the price of rice drop to about the 90 percent support level, the national average price of rice to growers might be between \$1.25 and \$1.30 per bushel compared with about \$1.73 in 1945-46. However, with the likelihood that substantial exports will continue in the first few months following the United States harvest when the movement from farms is heavy, early season prices in 1946-47 are not expected to decline to the support level.

R. E. POST, BAE

## FRUIT AND NUTS

**O**RCHARDS and vineyards in 1946 will produce slightly larger crops of fruits and tree nuts than in 1945, if average weather and good production practices continue. Such an output would include at least an average-sized crop of apples, in contrast to the very short crop in 1945. As additional shipping becomes available, increased imports of fruits and nuts, notably bananas and pineapples, may be expected.

While conditions point to larger total supplies of fruits and tree nuts in 1946, total demand for them is not expected to be so strong. Military requirements for fresh and processed fruits will be much smaller than in the recent war years. Lend-lease shipments of fruit, although never large, have been terminated. On the other hand, commercial exports may be expanded, but they probably will not reach prewar levels for several years, because of the war impairment of foreign markets. Such markets at best have taken only a small percentage of the domestic fruit and nut crops.

Although domestic civilian consumer purchasing power will not decline in the same degree as national income, civilian demand in 1946 may not be quite as strong as in 1945. Larger supplies of fruits and tree nuts probably will be available to civilians than in the wartime period. The result of larger supplies with some reduction in total demand inevitably would bring prices next year considerably lower than the high wartime levels.

Total production of fruits and nuts in 1945 was slightly smaller than the record of approximately 17 million tons (fresh basis) in 1944. However, new records were set in 1945 for citrus fruit, peaches, pears, and almonds. Grape production was only slightly smaller than the record-crop of 1943.

Prices to growers for the 1945 crops of deciduous fruits thus far sold averaged at or near the high wartime levels of 1944. In general, prices for these fruits were at or near ceilings though prices for some fruits, notably peaches, declined temporarily while marketings were at a peak. Prices for the remaining fresh deciduous fruits are expected to continue at or near the current high levels. Grower prices for this year's crop of dried fruits were established early in the season at levels near those in 1944.

Prices for citrus fruits are expected to decline considerably once the mar-

kets become well supplied with fruit from the prospective record-large crop, which is indicated to be about 8 percent larger than the large 1944-45 crop.

The 1945-46 commercial packs of dried and frozen fruits, and canned fruits and fruit juices will be about as large as the respective 1944-45 packs. Mainly because of drastic reductions in military requirements following the abrupt end of the war with Japan, civilian supplies of commercially processed fruits and fruit juices, except possibly frozen fruits, will be substantially larger in the 1945-46 season than in the preceding season. These commercial supplies plus home-canned stocks should provide civilians with ample supplies of most items in 1946.

B. H. PUDOLS, BAE.

## VEGETABLES

**I**n adjusting to reduced peacetime needs, production of truck crops for processing probably will drop below the high wartime levels, but over the years will continue to expand above prewar levels. Commercial canning will increase both absolutely and in proportion to the quantity of vegetables sold fresh. Commercial freezing, now still in its infancy, is expected to grow at an even more rapid rate.

Prices growers receive for their 1946 commercial production of truck crops are expected to fall below the peaks reached during the war, but will in general remain well above prewar levels. Prices paid for crops produced for processing probably will decline relatively more than prices for fresh market production.

Supplies of commercial truck crops for fresh market this fall are nearly one-third larger than those of a year ago and considerably above average. Ample supplies of canned vegetables are anticipated for this coming winter and spring. The enormous cuts in military requirements for canned vegetables, and further increases in the

estimated size of the 1945 packs, have changed the outlook for civilian supplies of commercially canned vegetables in the 1945-46 pack year. Formerly the prospect was for the shortest per capita supply in more than 10 years; now the outlook is for nearly, if not actually, the largest total per capita supply on record.

### Potatoes

With digging well under way on the second largest potato crop on record, more than ample supplies seem certain for this winter and next spring.

Marketings of early potatoes next spring may have to compete with a very large carry-over from the 1945 late crop. Military requirements for potatoes in 1946 will be considerably less than in 1945 and civilian demand next year will be somewhat weaker than this year.

With assurance of price support for the 1946 potato crop at not less than 90 percent of parity (or at about \$1.10-\$1.15 per bushel), potato growers probably will be inclined to maintain total acreage near this year's acreage. The long-time shift in production toward areas with higher yields per acre was speeded up during the war. Consequently, average growing weather in 1946 may be expected to result in yields considerably higher than prewar. For the 18 surplus late States, an acreage equal to this year's, with yields equal to the 10-year (1934-43) average, would produce a crop in these States in 1946 of nearly 245 million bushels, about 5 percent below average. If the 1946 potato crop is much larger than average, prices received by growers may not average much, if any, above the support level.

### Sweetpotatoes

Supplies of sweetpotatoes for the market during the next 6 to 8 months will be adequate but not burdensome. Although there has been in the past a long-time gradual downward trend in per capita consumption of sweetpotatoes, the natural increase in the total

population probably will provide an annual outlet in the next few years for a total sweetpotato production somewhat above the 67-million-bushel 10-year (1934-43) average. Prices to growers for at least the 1946 and 1947 crops will be supported at not less than 90 percent of parity which at present would be about \$1.35 to \$1.40 per bushel.

### Dry Beans and Peas

Foreign relief needs for dry beans and peas will continue large for another year. Commercial exports from the 1946 crops, especially peas, may be negligible. Domestic demand during the 1946-47 season probably will call for a slightly larger 1946 production of beans than this year, for which a crop of nearly 15 million bags is indicated. For peas it would mean a considerably smaller production than the 58 million bags indicated for this year.

Present legislation requires that prices to growers for the most important varieties of dry beans and peas be supported at not less than 90 percent of the parity or comparable price. Such prices, although moderately lower than in 1945, would be substantially above prewar. Announcement already has been made that the 1946 crop of dry smooth peas will be supported at 90 percent of the comparable price as of July 1, 1946.

H. W. MUMFORD, JR., BAE

### FATS AND OILS

**P**RODUCTION of fats and oils from domestic materials in 1946 and 1947 is likely to be about the same as the 9.5 billion pounds produced in 1945, or slightly higher. Net imports of fats and oils in the United States are not likely to reach the prewar level of 1.5 billion pounds in either 1946 or 1947. Demand in the next two years probably will be strong enough to support a consumption of 10.5 to 11 billion pounds, at 1945 prices.

Most fats and oils prices, now about 50 percent above the 1937-41 average, probably will remain at ceiling levels in 1946 and early 1947. If ceilings are removed in 1946, prices of some fats and oils will advance.

In 1945 exports of fats and oils from Asia, Africa, South America, Australia, New Zealand, and the Pacific Islands, and production of whale oil from the Antarctic, probably will total only about 4.3 billion pounds compared with an average of 9.6 billion pounds in prewar years (1934-38). Recovery to the prewar level will take at least 2 years. In the meantime European demand for fats and oils probably will continue strong.

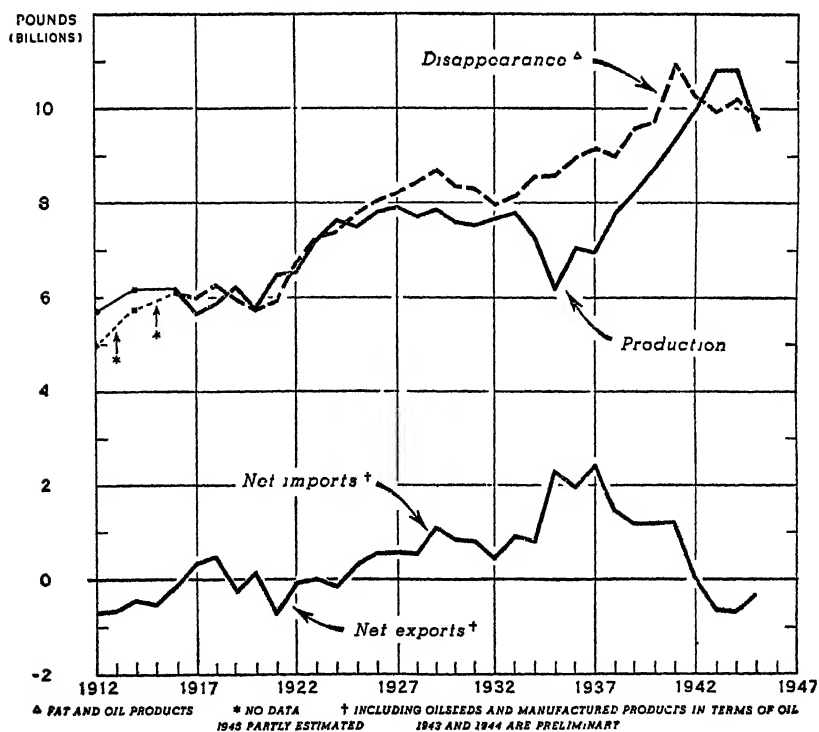
By mid-1947, supplies of low-priced tropical oils and whale oils in Euro-

pean markets may be large enough to depress lard prices. This would tend to weaken prices of many fats and oils in the United States. But any decline is likely to be moderate. No major reduction in prices of fats and oils is likely in 1947, unless there is a general business recession.

Prices of oilseeds produced in 1946 may average moderately lower than the prices for the 1945 crops, partly because of lower prices for oilseed meal in late 1946 and in 1947. Demand for high-protein feeds may be less strong during the summer and fall of 1946 than in 1945 if returns to poultry and dairy producers decline appreciably.

Soybean prices, now supported by subsidies to processors, bring farmers

### FATS AND OILS: PRODUCTION FROM DOMESTIC MATERIALS, NET FOREIGN TRADE AND DOMESTIC DISAPPEARANCE, UNITED STATES, 1912-45





an average of about \$2.05 per bushel. This is about 30 cents per bushel higher than the oil and meal equivalent value of soybeans with soybean oil and soybean meal at ceilings. If subsidies to soybean processors are withdrawn after 1946 crop contracts are completed, prices to growers might decline about 30 to 35 cents per bushel. Any tendency for oil prices to advance probably would be offset by a declining tendency in meal prices.

Soybean acreage and output may decline in 1946, as a result of shifts into hay and pasture. A crop of 5 to 10 percent smaller than in 1945 would bring supplies of edible fats and oils into balance with probable demand at 1945 prices.

The flaxseed price support, at 90 percent of the present parity, would be about \$2.65 per bushel, farm basis, about 9 percent less than the prospective average farm price of \$2.90 for the 1945 crop. The current price for flaxseed reflects ceiling values of linseed oil and meal. If ceiling prices are removed in 1946, linseed oil and flaxseed prices will advance.

Flaxseed acreage will be substantially reduced in 1946 unless special incentives are offered to growers, as in 1945 when a payment of \$5 per acre was made. Reduction in acreage would tend to support linseed oil prices and, to a lesser extent, linseed meal prices at high levels in the summer and fall of 1946, but not in the winter of 1946 and spring of 1947 if Argentine flaxseed becomes available in large volume at that time.

Demand for shelled peanut products will be moderately lower in 1946-47 than in the past 2 years. Prices of peanuts, at 90 percent of the present parity for peanuts for nuts, would be slightly over \$150 per ton, only 7 percent less than the prospective average price in 1945-46. At this price for all peanuts, production probably would be maintained at a relatively high level.

E. L. BURRIS, BAE

## TOBACCO

**D**OMESTIC and foreign demand for United States tobacco is expected to continue relatively strong during 1946 and into 1947 in view of the probable high level of domestic consumption of tobacco products, particularly cigarettes, and the favorable outlook for exports. Small tobacco stocks now in the United Kingdom and in other importing countries will require several years of above average imports to rebuild them to prewar ratios. United States exports have increased substantially since the end of the war in Europe and are expected to continue at a high level during the next two marketing seasons because this is the only country where fairly large amounts are available for export.

While the dollar exchange may be a major problem in most foreign countries during the next few years, tobacco is such an important source of revenue to foreign governments that arrangements likely will be made for its purchase. Inasmuch as about a third of the total domestic tobacco production and a half of the flue-cured is shipped abroad in normal times, the level of exports during the next few years will be an important factor in the determination of the prices paid growers, especially for flue-cured and dark tobacco.

### Prices and Stocks

Although the domestic price outlook for tobacco is generally favorable to growers, some price declines below present high levels are in prospect. The situation, however, differs among the individual types. Prices this year and last reached peak levels, and under ceiling regulations, the poor grades of flue-cured, Maryland, and some types of cigar tobacco have sold as high as the better grades of leaf. In the absence of ceilings, the price spreads between high and low grades would be much wider than during the past 2 or 3 years.

## COTTON

Stocks of flue-cured and burley, the major cigarette types, are larger now than in most prewar years, but they as well as stocks of most other types are below average in relation to the current rate of disappearance. Although this disappearance rate in 1944 and 1945 was the largest in history, it was exceeded slightly by 1945 production. The record 1945 crop of over 2 billion pounds makes the present supply larger than a year ago, and with disappearance slightly below the exceptionally high level of last season, stocks probably will be slightly larger for the 1946 marketing year.

### Manufactured Products

The over-all consumption of tobacco products in this country is continuing at the highest level in history. Domestic consumption during the next year or so is expected to continue at or near the present high level, although some decline in cigarette production is probable because of the substantial decline in Government purchases for overseas shipment.

Domestic cigar consumption during 1946 is expected to be above the annual average of about 5½ billion consumed during the prewar years 1934-38, and the production of smoking tobacco will probably taper off during the next few years to a level somewhat above the prewar average of around 200 million pounds. Snuff consumption is at the highest level in history, but, along with chewing tobacco, some decline is expected to follow the drop in employment in war plants.

### Farm Production

The exceptionally high prices being paid for all types of tobacco this year and last may encourage farmers to increase production in 1946. The current supply situation seems to justify larger acreages of Maryland, flue-cured, and cigar filler and binder in 1946. Present supplies of other types, however, including burley and dark air-cured, appear adequate.

W. P. Young, BAE

**F**OR the fifth successive year farmers are harvesting a cotton crop bringing a return in excess of 1 billion dollars. Returns this season are now expected to total about 1.2 billion dollars, slightly lower than in any of the past 3 seasons but larger than in 23 of the past 36 seasons.

Government loan rates for cotton fixed at 92½ percent of parity, at least are for 1946 and 1947. Little prospective decline in parity, combined with more plentiful supplies of farm labor, fertilizers, farm machinery and other supplies, all favor an increased acreage of cotton in 1946. An acreage might be realized intermediate between this season's level of 18.3 million acres and the minimum permissible Government allotment of something over 27.0 million acres. Such an acreage, with yields equal to the 1940-44 average, would result in a production of about 2 million bales larger than in 1945.

Present indications point to a domestic supply of American cotton in 1945-46 of nearly 20.6 million running bales, of which slightly more than 11 million bales represents carry-over at the beginning of the season and 9.5 million new production. Although the carry-over this season was slightly larger than in 1944, the total supply is 2.1 million bales smaller than last season and smaller than in any other season since 1936-37. This supply includes an abnormally large amount of the shorter staples and lower grades.

Mainly as a result of the tight labor situation, domestic mill consumption has steadily declined since the peak annual rate of nearly 12 million bales established in April 1942. Last season consumption totaled slightly under 9.6 million bales, but by the end of the season it dropped to an annual rate of only 8.2 million bales. Some recovery from this summer's low is expected, but it is doubtful if consumption this season will exceed 9.0 million bales even though the supply of raw cotton is large and the demand justifies a higher

level of production. The failure of mill consumption to be higher is largely a question of the labor situation and profits.

American cotton will face even keener competition in foreign markets as ocean shipping space becomes more plentiful. The August 1, 1945, world carry-over of foreign cotton totaled 14.2 million bales, slightly smaller than the record level in 1943 but nearly double the level in 1939. Since most of the carry-over of foreign cotton is held in exporting countries, it, too, will be seeking export outlets as soon as conditions permit.

The effects of the present export subsidy on United States exports as shipping becomes more plentiful will be lessened because some countries, particularly the United Kingdom, already have acquired title to considerable cotton in other export countries. Also, since the subsidy rate of 4 cents a pound was announced in November 1944, prices of American have advanced relative to most foreign growths. Even so, there are a number of areas that are potential importers of sizable quantities of American cotton this season and next, if an adequate basis for the dealings can be developed. The full utilization of such export possibilities as could be developed would do much to move the low-grade and short-staple cotton which bulks so large in the current carry-over.

In any event, it appears likely that exports of American cotton may total about 3.0 million bales this season as compared with 2.0 million bales last season and from 1.1 to 1.5 in the preceding 4 seasons. With the possibility that both the world consumption and production of foreign-grown cotton will increase moderately, but with little net change in the carry-over of foreign cotton, the outlook is for a little smaller total world carry-over on August 1, 1946, than in 1945, mainly the result of reduced American carry-over.

Although the outlook for the next year or two is for favorable farm re-

turns from cotton, certain highly important unfavorable factors in the longer-time outlook should not be ignored. Domestically, rayon consumption has been increasing at a very rapid rate and important gains in rayon and other synthetic fibers are expected to continue during the next several years. At the same time American cotton will meet increased competition in foreign countries both from synthetic fibers and foreign cotton. Foreign production of rayon in 1942, the latest year for which data are available, was equivalent to roughly 6¾ million bales of cotton compared with only 1 million bales in 1932.

H. G. PORTER, BAE

## WOOL

DOMESTIC wool production in 1946 will be a little below the 1945 output, continuing the decline begun in 1943. The 1945 production now estimated at slightly less than 400 million pounds, about 15 percent smaller than the 1942 record, is the smallest since 1920. More profitable returns from other farm enterprises than wool and lambs coupled with difficult labor problems have been largely responsible for this decline in sheep numbers and wool production.

Mill consumption of apparel wool in 1946 will be smaller than the wartime annual rate of 1 billion pounds, grease basis, largely because of the decline in military requirements. Even so consumption will be much larger than the 1935-39 average consumption of close to 600 million pounds, grease basis, and possibly twice as large as the equivalent domestic wool production. In the next year or two consumption will be supported by a large demand for fabrics and clothing for inventory replenishment, by requirements for men returning from the services, and by a relatively high level of consumer incomes. But use of domestic wool will probably be negligible, now that military orders are small and while foreign wools are

available to domestic mills at much lower prices than comparable native wools.

Because the Government will continue to purchase domestic wools until June 30, 1946, at prices specified in the 1945 purchase program, growers are assured of present prices, now averaging about 41 cents a pound, through the early part of 1946. This is about 71 percent above the 1935-39 average. Prices to growers after June will depend on the action taken regarding further Government support. Without price supports, prices of domestic wool would decline to a level competitive with duty-paid imported wools. Present support prices for fine and medium grades of domestic wool at Boston are about 20 percent higher than current prices of imported wools of comparable quality and preparation.

Because of the large world carry-over of apparel wool, estimated as of July 1, 1945 to be equal to a prewar average world consumption of about 1.7 years, world wool supplies will continue to remain large for a number of years. This unfavorable factor in the long-time price outlook may be partly offset, however, by Government control of sales and prices of carry-over wools as well as by the new production in the United Kingdom and British Dominions during the years required to dispose of the surplus. These countries in prewar years provided more than half of world production of apparel wool, and almost three-fourths of world exports. They now hold the greater part of the world carry-over of apparel wool.

FLORENCE HAMILTON, BAE

## SUGAR

**S**UGAR supplies for the United States are expected to be a little more plentiful next year than in 1945, but still considerably below the quantity which would be purchased at current prices and with no rationing. The reported discovery of 1½ million tons of sugar in storage in Java will add

about 5 percent to the estimated world supply of sugar. The effect of the Java stocks on supplies for the United States will depend on the amount allocated to this country either directly or indirectly by increasing the quantity of sugar which the United States may obtain from other sources. In prewar years, a large part of the sugar exported from Java went to Asia.

Production of sugar in continental United States in 1945 probably will total about 1.9 million tons (raw basis) as compared with 1.5 million in 1944. However, most of this sugar will not be available for consumption until 1946. The 1945 sugar beet crop is expected to be at least one-third above 1944 but slightly below the 1934-43 average. The sugar cane crop in Louisiana and Florida is indicated to be about 14 percent above 1944 and nearly one-fourth above the 10-year average.

The announced increase of \$1 per ton in the price support payment for sugar beets grown in 1946 and equivalent increases for cane, including that grown in Hawaii, Puerto Rico and the Virgin Islands, should result in further increases in the domestic production of sugar in 1946. Domestic production normally supplies about two-thirds of total consumption. Nearly 60 percent of domestic production comes from insular territories and the remainder from mainland crops of sugar beets and cane.

Sugar production in Cuba is expected to be larger in 1946, as the drought which reduced the yield of the 1944-45 crop has been broken. Production of beet sugar in Europe should increase gradually during the next several years, as the industry recovers from the effects of the war. Sugar production in the Philippines and Java normally would be expected to increase in the same manner. However, recovery may be slower because of the longer time needed to reestablish cane fields and harvest a crop.

World sugar supplies in 1945 are the smallest since the start of World War

II. This shortage is the result of the loss of sugar production from the Philippines and Java, greatly reduced production in Europe, a small crop in Cuba in 1944-45, and small crops of sugar beets in the United States in 1943 and 1944. World sugar stocks were reduced about 2.4 million tons in 1943 and 1944. A further decline of 1.2 million tons in 1945 was in prospect before the discovery of the Java stocks.

R. A. BALLINGER, BAF

## MARKETING AND TRANSPORTATION

WITH few plant reconversions to make, generally low inventories, and good financial positions after several wartime years of profitable operation, most food marketing agencies find themselves in a relatively strong position to meet increasingly competitive conditions in the civilian market.

### Dairy and Poultry

Of importance in reconversion of dairy processing plants during 1946 are the new relationships in market values of milk for various manufactured products which have resulted from special wartime demands for fluid milk and dairy products other than butter. Relatively attractive prices for whole milk made it more profitable for many farmers to deliver whole milk than to separate the cream and feed the nonfat solids to farm animals. Shift to whole milk delivery has resulted in over two-thirds of the nonfat solids being marketed for human food. Milk production and butterfat supplies increased by nearly 10 percent since 1940. The supply of nonfat solids going into foods in the same period has increased nearly 80 percent. If dried milk production is to be maintained new domestic outlets must now make up for the decline in military and export requirements which largely accounted for the increased war demand.

Effects of lifting rationing from red meats, elimination of lend-lease, and

the drop in military requirements will return egg marketing to a strongly competitive basis in 1946. For poultry, long-run improvements in marketing may develop rapidly enough to offer some help in the difficult situation which, in view of the approximate 50 percent increase in production during the war years, may occur with the slackening in war demand. Evisceration of dressed poultry should help to improve consumer demand as poultry encounters increasing competition from red meats.

Fruit and vegetable processors must face new conditions within their industry in marketing the 1946 pack. Government requirements, although substantial, will be sharply reduced in all lines. Dehydration operations, which have increased fortyfold over prewar, will be greatly curtailed. Competition for canners will be more noticeable from the quick-freezing process, where the peacetime output has tripled. In meeting the new conditions, canners will not be handicapped by excessive carry-over of the 1945 pack for most items.

### Food Processing

Many of the far-reaching changes in food processing and marketing expected in the years ahead center around new developments in food packaging. Prepackaging of fresh fruits and vegetables seems an inevitable development. Protection against weight loss from evaporation and against bruising and spoilage is promised by prepackaging. Savings in transportation costs can be effected when the products are trimmed for packaging at an early stage in the marketing channel. The further extension of prepackaging meats is also in prospect.

Of the several divisions of food processing, potentialities for expansion seem greatest for frozen foods. But a longer wait than has been generally anticipated appears likely before the full benefits of the industry's broadened postwar program will reach

civilian markets. Need for special facilities and equipment for distribution is one of the factors tending to slow the expansion of frozen foods.

Retail food stores during the post-war years may undergo many changes influenced by new processed products and the elimination of wartime restrictions. The position of the efficient modern, large-volume, self-service stores is likely to be strengthened. Equipment and store arrangement of existing self-service food stores will be materially altered in line with changing products and as a result of new competitive factors. Present fresh produce departments may be almost entirely replaced by display cases holding prepackaged products, some of which will be refrigerated. Meat counters might eventually give way to open-faced refrigerated cases containing neatly packaged cuts of meat, either fresh or frozen.

### Textile Marketing

Rayon consumption as a percentage of total mill consumption of all fibers increased from 4 percent in 1930 to 11 percent in 1944, with cotton declining from 85 to 79 percent. During the same period the price of rayon staple fibers decreased from about 5 times the price of cotton to about the same price, but the increase in rayon consumption can be attributed only partly to these changes in relative price, since rayon would have replaced cotton in many uses even at much less favorable price ratios. With rayon and cotton prices now about equal, relative price changes presumably will be less of a factor influencing substitution of synthetics for cotton from now on than in the past.

Nevertheless, it seems probable that rayon will continue replacing cotton to a considerable extent in such uses as men's shirts, curtain materials, blankets, sportswear and possibly sheets as well as numerous industrial uses. Consumer preferences and prejudices, even more important than relative prices, seem to be veering toward synthetics in some of these lines. But

the greatest relative changes in substitution of synthetics for natural fibers in 1946 and the next few years may be in woolen goods, where rayon seems to be making rapid inroads into such uses as men's suits, and blankets.

In the years beyond 1946 a good many significant developments in marketing cotton, wool and textiles are expected to occur. It seems probable that retailing of textiles may be made much more efficient through simplified service methods. Cotton textile manufacturing methods have been lacking in the rapid technological advances which have characterized the production facilities for synthetics. This is not necessarily a fault of the cotton industry, which is an old established one less subject to change than in newer industries. There is some reason to believe, however, that a good many improvements could be made in cotton milling and textile finishing and manufacturing methods, resulting in greater efficiency, lower cost and possibly improved types of products. Recent interest in these phases of cotton marketing indicates that these tentative conclusions of some observers will be more carefully examined during the next few years, and that an effort will be made to determine what is needed to put the cotton marketing and textile industry on a more modern, efficient basis.

### Marketing Charges and Costs

Slightly higher levels of marketing charges for farm food products are in prospect for 1946. These should result from relaxing of price controls and supports and from pressure of higher operating costs for marketing agencies.

Farm prices will decline in relation to retail prices and marketing margins will widen as the subsidies paid to marketing agencies are removed from commodities now subsidized. During the first 8 months of 1945, subsidies to marketing agencies made up 7 percent of total marketing charges. More than half of the sub-

sidies were paid on meat products for which subsidies covered 27 percent of marketing charges.

Labor costs in wages and salaries account for about half of total operating costs of marketing agencies. Wartime advances in hourly earnings were partly offset by increased productivity per man-hour and by reduction in services, but unit labor costs of food marketing in 1944 were 20 percent higher than in 1940, rising about 2 percent from 1943. There is little indication of an immediate reversal of this trend, particularly in view of a probable partial resumption of prewar marketing services and introduction of some new services. Unit labor costs probably will continue to increase at least through 1946.

Agencies marketing farm products have fared well during the war. Numbers of financial failures among these agencies continued the sharp wartime decline into early 1945. Net profits after provision for Federal taxes generally have exceeded prewar 1935-39 levels. Although 1945 should be another good year, business failures may find many additions from new business ventures.

### Transportation

Shippers of farm products can expect the freight traffic situation, although eased by the end of the war, to show general improvement during 1946. Prospects of early easing of the railroad labor shortage and the acceptance by locomotive builders of

large orders for new equipment help to brighten the picture. The supply of class A box cars, suitable for handling grain, will be increased as a result of the decline in shipments of munitions which had made heavy demands on this type of car. Supply of livestock cars should be adequate, unless there is unusually heavy liquidation of cattle from the range.

Prospects in regard to refrigerator cars are relatively less bright. On July 1, 1945, there were 2,700 fewer private and railroad-owned refrigerator cars in service than on the same date a year earlier and 5,800 less than in July 1943. Refrigerator cars will continue to be in tight supply until more can be built. The only immediate remedy for the shortage lies in expedited movement and the prompt return of empty cars.

Improvement in motortrucks may be delayed for a while by the desire of manufacturers to get into volume production faster by a minimum of change from 1942 models. Subsequent models will probably reflect greater use of lightweight materials and special alloys developed for other uses during the war. Eventually the turbine may be developed to the point where it challenges the supremacy of the reciprocating engine for motortruck use. However agricultural interests may gain more in improvement of terminal market facilities for receiving truck-borne agricultural products than from any improvements in the trucks themselves.

C. C. CURTISS, BAE

## Our Agricultural Plant in 1946

**S**TARTING with a late wet spring, most crops in 1945 made remarkable progress and it now appears that total farm output will approach that of 1944, the highest year of record. This year's output adds to the evidence that strong factors other than weather are operating to sustain the almost

irreversible process of increased agricultural production. This further emphasizes the need for providing peacetime outlets for a volume of production considerably in excess of prewar levels. In general, the nation faces 1946 with a farm plant capable of a high-level of sustained production.

Farmers are emerging from war with an agricultural plant in relatively better condition than after World War I. In the quarter century since then farmers have come to know more about the resources with which they work and the practices that build or tear down the soil. Although heavy inroads have been made on fertility reserves, relatively little irreparable damage has occurred. Furthermore, the heaviest withdrawals have taken place in the Corn Belt where fertility reserves are greatest. Even here, however, farmers are concerned over the high proportion of cropland now intertilled and are anxious to return to more permanent systems of farming.

While the extent of change in 1946 from wartime patterns of production will vary in different parts of the country, the overall level of production for the nation as a whole next year may not change much from that of the war years.

In the South, war-induced changes in farming systems will be encouraged in times of peace. These include reduction in the intertilled acreage and protection of that remaining by the use of winter cover crops, the extension of the acreage in lespedeza and other adapted forages and the increase of livestock to consume them. Here, to a greater degree than elsewhere, the widespread adoption of conservation practices in general and the judicious use of fertilizers can contribute to greater prosperity.

Even in the Plains where alternatives to cash-grain production are limited or nonexistent over wide areas, it seems unlikely that there will be a return to the high level of 52 million acres of wheat planted in 1935-39. Less than 43 million acres were planted in the Plains for harvest in 1944, but nearly 50 million acres were planted for the 1945 harvest. Portions of the Plains region were reminded by the return of drought conditions this season of the need for greater emphasis on summer fallow and other practices designed to conserve moisture, prevent

erosion and increase and stabilize yields per acre.

Resources available for production in 1946 will be generally freer than at any time since the war began. There is likely to be more regular and seasonal farm labor available, but some relatively tight situations can still be experienced. The quality of the farm labor force will no doubt improve. Farmers generally have accumulated capital reserves and production credit will be available from many sources at reasonable rates.

The manufacture of tractors, trucks, and farm machinery of many kinds has been accelerated by the ending of the war. While farmers generally would have been able to carry on in 1946, production plans will be less influenced by serious shortages of these items. Abundant supplies of most kinds of seeds, with the exception of alfalfa, alsike clover, white clover, Kentucky bluegrass, crimson clover, and hairy vetch, will take care of ordinary needs and will permit shifting a portion of tilled acres into less intensive soil-conserving uses. Supplies of feed will be generally adequate to support livestock numbers carried over from 1945 and to provide for a somewhat larger hog production in 1946.

Supplies of fertilizer are expected to be ample for all needs during the latter half of 1946. In intervening months problems in fulfilling commitments for reconstruction abroad and those of adjusting the industry to a peacetime basis may make it difficult to meet all domestic demands. With the exception of nicotine and rotenone, insecticides and fungicides will not constitute limiting factors in 1946 production. Some new types developed during the war and heretofore reserved for military needs will be distributed for civilian use.

Miscellaneous farm supplies such as metal roofing, lumber substitutes, plumbing, and heating equipment, nails, staples, bale ties, electric motors, hand tools, farm freezers, and milk coolers will be generally available in



larger quantities in 1946 than in 1945. Tires for tractors and farm implements should be adequate for farm requirements and those for trucks and passenger cars generally available after the first quarter of 1946. Supplies of lumber available to farmers in 1946 may be about double amounts used in 1945 and near the 1939 prewar level of use.

### Prospective Farm Returns

Farmers have considerable assurance that returns for the basic commodities and those covered by the Steagall amendment will be above the returns in the years immediately preceding the war. Assuming that funds will be made available, the following commodities for which wartime increases were requested are to be supported at not less than 80 percent of parity (cotton at 92½ percent) . . . *"until two years after January 1 following the date on which the President or the Congress shall have proclaimed hostilities to have ended."* They are: corn; cotton; wheat; rice; tobacco; peanuts for nuts; hogs; eggs; chickens (excluding chickens weighing less than 3 pounds liveweight and all broilers) and turkeys; milk and butterfat; specified varieties of dry peas and dry edible beans; soybeans for oil; peanuts for oil; flaxseed for oil; American-Egyptian cotton; potatoes and sweet potatoes (when properly cured).

In addition, resumption of world trade, a growth of 5 million in population since the beginning of the war, and a consumer purchasing power only moderately below wartime levels will all be factors tending to maintain farm returns.

### Direction of Production

In the year ahead, factors of demand and supply will be much more important in the production picture than in any of the last 4 to 5 years when tremendous war needs required a very high level of production. But food needs and market outlets now appear to justify production at continued high

levels, though balanced somewhat differently than in 1945.

A high level of feed grain production will be needed to support a large livestock population and to build up adequate reserves. But this can be done even with some acreage reduction from wartime levels. Farmers' long-time best interests will be served by obtaining feed grain production from cropping systems that result in more stable relationships between intertilled, close-growing, and sod crops—with special emphasis on improved hays and pastures.

High prices for beef and adequate feed supplies are still holding cattle on the ranges, but stockmen will watch prices during 1946 for signs of weakening. Numbers of beef cattle and sheep should be adjusted more closely to the long-time carrying capacity of pastures and ranges. And methods of operation need to be worked out to provide a margin of profit from continued high-level production with the relatively lower prices that might be in prospect.

Judging by wartime trends, it seems probable that civilian consumption per capita of milk and milk products will be greater than in prewar years. This is in line with improvements needed in the national diet. Better feeding of the improved forages resulting from postwar rotations and of concentrates should be employed to maintain milk production and to keep it closely geared to population growth.

Factors influencing hog production point to a total 1946 pork output moderately greater than in 1945, though the 1946 spring pig crop may be about the same as last spring. Farm egg and poultry production next year will probably decline from this year's record levels. Commercial producers face increased competition from the sideline poultry production greatly expanded during the war.

Winter wheat is already in the ground. Some decrease in spring wheat in the high risk areas would be desirable, this loss being partially off-

set by some increase where wheat is used as a nurse crop on land being returned to hay production.

Even though the fats and oils shortage will continue well into 1946 and possibly into 1947, growers are hesitant about the risks in flax production and want to confine production to the lower-risk areas. Similarly, many soybean producers are anxious to reduce the acreage of intertilled crops, and in high-yielding corn areas the competition with corn will be increasingly keen in 1946. Peanut producers have already confined production pretty largely to the older areas, and may continue about at 1945 levels as long as returns from peanuts remain favorable in relation to other crops. Cottonseed production was affected adversely by weather in 1945 and can be expected to increase in 1946.

Fruit and vegetable production in 1946 will be governed rather quickly by any decline in purchasing power of domestic consumers. Wherever possible, farmers will need to adjust 1946 production levels to prospective demand and prices, as well as to expenses.

By following developments closely during the fall and winter months, farmers can more intelligently plan a 1946 production—food to be consumed in 1947 for the most part—that will be as nearly as possible in line with needs at home and abroad.

NEIL W. JOHNSON  
*Bureau of Agricultural Economics*

## FARM LABOR

FARM labor supplies in 1946 are expected to be more plentiful than in any of the war years. But relatively tight seasonal labor supplies may exist in some areas where acreages of crops, requiring much hand labor, are maintained at record levels. The supply of year-round labor should increase by next spring when demobilization of veterans and return of some men from war industry are expected to add to the supply of regular farm workers.

Several factors will determine the rate of increase in supply of labor for farm work. Of the 9 million men expected to be demobilized from the armed forces by the middle of next summer, about 10 percent, or 900,000, came from farms at the time they entered the service. But a significant proportion of these 900,000 men may not be available immediately for farm work. Prospects of nonfarm jobs will appear attractive to many, and others may care to exercise some of the provisions of the "GI bill of rights" for education and readjustment allowances while making final job decisions.

The number of war industry workers who return to farms and the rate at which they go back will be governed by the speed of reconversion to a high level of peacetime employment. Unemployment of considerable volume is quite probable during the next six months. But short-term unemployment during the transition period may not add significantly to the farm labor supply. Unemployment compensation together with later prospects of jobs in peacetime industry at rates higher than farm wage rates are likely to slow up the movement of workers back to farms. However, where new war plants were located in predominantly rural areas and the working force was drawn from nearby farms and small towns, at least a part of the released war industry workers should become immediately available for farm work.

The return of men from the armed forces and, war industry to the regular farm labor force may not result in a large net increase in total employment on farms, but the average quality of farm labor should be better. The wartime farm labor force was made up of large proportions of older men, women, and children who contributed materially to wartime farm production records. Younger and more physically capable men who will return to farms from the armed forces and war industry are expected to replace many of the less efficient but

hard-working members of the wartime farm labor force, and also to enable farm operators to cut down on their long work days during the war.

Seasonal farm labor supply problems in 1946 will continue to be serious in several areas. The acreage of crops requiring large amounts of hand labor has risen to record levels in many localities. Maintenance of the acreages of these crops at high levels in 1946 will mean continuing large seasonal labor needs. Some areas specializing in the production of crops such as sugar beets, potatoes, cotton, peanuts, snap beans, tomatoes, and fruit will continue to experience harvest labor problems.

Strong recruitment programs will be needed for seasonal workers in such areas next year because of the absence of war emergency incentives. These programs will be needed especially in areas that have depended to a considerable extent upon imported foreign workers and the more than 100,000 prisoners of war who were available for seasonal farm work in 1945. Present indications are that prisoners of war will not be available for farm work in 1946. Around 60,000 foreign workers have been employed during the peak seasons in 1945. The extent of their availability in 1946 is uncertain at present.

Thus the supply of seasonal labor will be "spotty" in 1946, not much different from 1945 in some areas but considerably larger in others. Returning war industry workers and servicemen will undoubtedly add to the available supply, and with the end of gasoline rationing, migratory farm workers may increase in number.

Farm wage rates next year will probably continue close to wartime levels, but there may be some decline from the 1945 peaks. With the expected continuation of relatively high cash farm income in 1946, the competitive position of farm employers for labor should be about the same as in 1945.

G. T. BARTON, BAE

## FARM MACHINERY

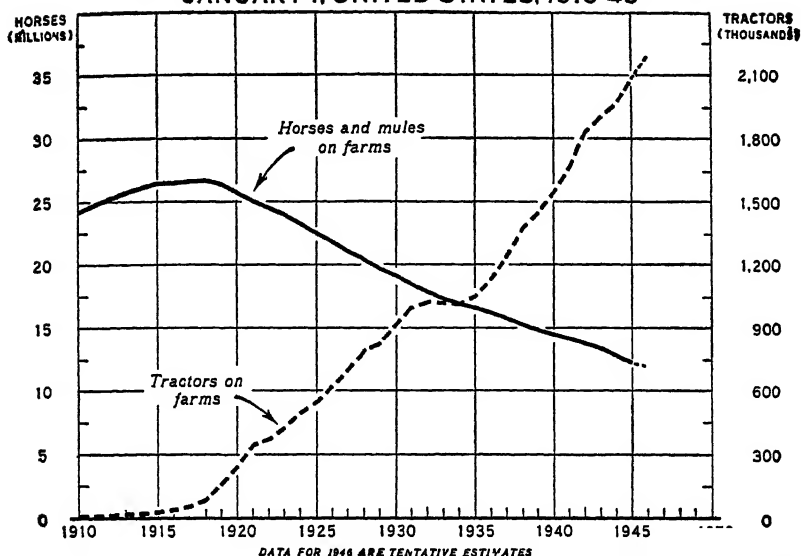
**P**RODUCTION of farm machinery and parts for domestic farm use in 1946 is expected to be larger than in any previous year.

Farm machinery quota restrictions and material allocations have been removed and manufacturers will determine the number of the different machines that will be produced in 1946. It is expected that 1946 production will provide relatively larger supplies of tillage and seeding machines than during the war. Production of tractors for farm use in 1946 may be larger than the 1941 record output when farm purchases were estimated at 286 000 units. Production of many other machines is likely to exceed the 1941 output. A sufficient supply of tractor and implement tires should be available to meet farm requirements in 1946.

In 1945 farm machinery output will probably exceed the large volume of 1944 but will be below the record output of 1941. Tractor production in 1945 will not be greatly different from the 1944 production for domestic farm use of more than 200,000 units (wheel type, crawlers and garden), but the 1945 production of many other machines will exceed the 1944 output. New type harvest machines and other important labor-saving machines has been produced in large numbers in 1945. Production of these machines has been relatively high, compared with prewar production, since 1941.

Tractors on farms increased by more than 12 percent during the 3-year period ended January 1, 1945, or at an annual rate of about 4 percent. The rate of increase in the next several years is likely to be at a higher level. For many machines the increase during the war period was much greater than for tractors. Even with an improved labor situation in prospect in 1946, demand for important labor-saving machines is again expected to bring further increases in the number of these machines on farms.

# **HORSES AND MULES, AND TRACTORS ON FARMS JANUARY 1, UNITED STATES, 1910-45**



U S DEPARTMENT OF AGRICULTURE

REG 38745 BUREAU OF AGRICULTURAL ECONOMICS

As numbers of tractors and power-driven machines have increased, the numbers of animal-drawn machines have been reduced. Total horse and mule numbers declined by about 1.4 million head during the 3 years ending January 1, 1945, and the decline is expected to continue at about the same rate for several years. The decline in numbers and in the use of horse-drawn equipment has been even greater than the decline in horse and mule numbers. Faced with labor shortages and with many new machines difficult to obtain, farmers worked their power machines more hours each year and have adapted many machines originally devised for animal power to tractor use. Use of custom machines has been greatly stimulated during the war period.

Further improvement in the farm motortruck situation in 1946 is in prospect. The 1945 production of light and medium motortrucks for civilian use is expected to be about 450,000 units, with more than half of the production available to farm users. The supply of used army trucks in 1946

will be larger than in 1945. Although there probably will not be enough truck tires to meet all requirements in the early part of 1946, they should be produced in sufficient quantities to satisfy requirements by mid-year.

A. P. BRODELL, BAE

## **FERTILIZER**

**F**ERTILIZER supplies for crops to be harvested in 1946 are now expected to be 10 or 12 percent above the quantities used in 1945, but approximately 10 percent short of the quantities requested by the Department of Agriculture for use in the current season.

Present indications are that supplies of potash available for the 1946 season may be approximately the same as for this year. There are prospects for increases in the supply of some nitrogen materials, particularly ammonium nitrate. Supplies of certain other nitrogen materials may be smaller but it is anticipated that total nitrogen available for fertilizer will be somewhat in excess of quantities used last year.

There will likely be a substantial increase in available supplies of phosphoric acid, primarily in the form of normal superphosphate.

Transportation problems, needs for reconstruction abroad, and the extent of output of synthetic nitrogen for fertilizer use may be factors that will continue to affect fertilizer supplies available for use on 1946 crops. Continuance of the wartime practice of farmers securing fertilizer well in advance of need for the remainder of this season would tend to prevent transportation or other difficulties in obtaining supplies. It is expected that supplies will be ample for the 1947 crop.

Fertilizer consumption increased at an average rate of about 10 percent per year during the war, and more would have been used if it had been available at the time most needed. Pressure of war production has emphasized the value of fertilizer and it is expected that educational and conservation programs by State and

Federal agencies will be instrumental in the use of larger quantities. Reports of State Production Adjustment Committees indicate continued increase in fertilizer use in areas and on crops that have previously been relatively light consumers.

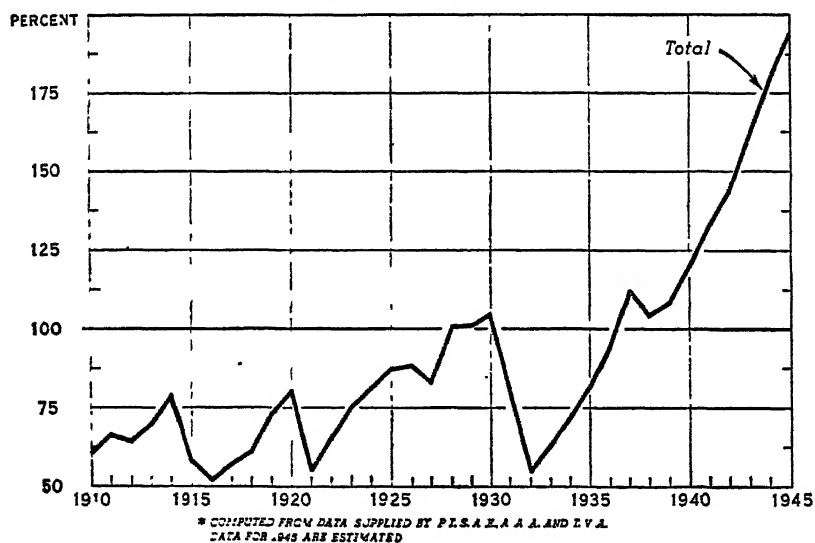
Although higher than the prewar average, prices per unit of plant nutrients have been favorable for increased use since 1941. The ratio of prices received by farmers to prices paid for commercially produced plant nutrients in 1938 through 1940 was below the average ratio for the period 1935-39.

Price ceilings have no doubt been an important factor favoring increased fertilizer use during the war period. Purchase by farmers of quantities desirable for soil fertility maintenance, and for use in a manner that will further this objective, will be facilitated by continuance of a favorable ratio between farm product prices and cost of fertilizer.

D. B. IBACH, BAE

### FERTILIZER CONSUMPTION IN TERMS OF NITROGEN, PHOSPHORIC ACID, AND POTASH, CONTINENTAL UNITED STATES, 1910-45\*

INDEX NUMBERS (1935-39=100)



## SEEDS

A MARKED shift from cultivated crops, so vital in the war economy, to hay and pasture crops is imminent in the reconversion period ahead. This will require more seed of legumes and grasses—particularly legumes—than were needed during the war years. There will be less demand, however, for certain seeds, such as orchard grass and meadow fescue, because sources of supply other than the United States will again become available to European countries. As supplies of legume and grass seeds become more plentiful and prices of other agricultural commodities decline, growers may well expect to receive lower seed prices, now about twice the 10-year (1930-39) average.

Although the total 1945 production of 22 clover, grass, and winter cover crop seeds, is 2 percent larger than in 1944, and 7 percent above average, supplies (current production plus carry-over) available for planting in 1946 are 5 percent smaller than a year ago (but still 18 percent above average).

Notwithstanding the 5-percent decline from last year, supplies of 18 out of 22 kinds of seed appear to be either sufficient or more than sufficient to meet the anticipated domestic sowing requirements in 1946. The kinds for which supplies are indicated to be ample for domestic requirements are red clover, timothy, redtop, orchard grass, meadow fescue, brome grass, crested wheatgrass, vetch except hairy, blue lupine, and common and perennial ryegrass. Imports are counted on to make up any sweetclover deficiencies, and the current supply of Ladino clover, although the largest on record, may be no larger than will be needed to meet the demand which in recent years has been increasing by leaps and bounds.

The six kinds of seed apparently in short supply are alfalfa, alsike clover, white clover, Kentucky bluegrass,

crimson clover, and hairy vetch. It will again be necessary to import much alfalfa seed. There is little or no likelihood of materially increasing the current supplies of any of the other five kinds through imports.

G. C. EDLER, BAE

## INSECTICIDES

SUPPLIES of insecticides for the 1946 crop year will be adequate or abundant with the exception of two important materials—nicotine and rotenone. In contrast to 1945 and other war years, pyrethrum will be available for agricultural use in adequate supply.

Supplies should be abundant for the standard arsenicals—lead arsenate, calcium arsenate, and paris green; the well-known fluorine compounds—cryolite, sodium fluoride, and sodium fluosilicate; the commonly used fumigants—including various forms of cyanide, methyl bromide, carbon bisulphide, and chloropicrin.

The various kinds of oils, creosote, dinitro-ortho-cresols, and similar compounds, phenothiazines, diphenylamine, tartar emetic, the mercurials, as well as the numerous kinds of wetters, spreaders, and detergents, should be in adequate supply. The same or even better applies to the standard dust diluents for insecticides.

Some of the new insecticides, as well as activators of standard materials which have been developed recently and had limited use during the past season, will be more generally available during 1946. Sulphur, copper, and the various synthetic organic fungicides and their standard diluents should be adequate and, for some materials, abundant.

Larger amounts of rotenone insecticides will be available than at any time since 1941. The season's supply of rotenone, however, will come from South America and will be appreciably less than the amount used during 1942 which amount included imports from the East Indies. Nicotine insecticides

will again be less than needed to meet average uses, and it is expected they will be the one important group of insecticides not adequate for all usual requirements.

Supplies of the chemical DDT will be freely available for use in producing DDT insecticides and many products will be on the market for 1946. It is not possible at this time to indicate all the uses to be recommended for DDT insecticides or to forecast the quantities that may be available, but it seems certain a considerable amount will be available and used.

Until the results of the experimental work of the past season are available and State and Federal agencies have issued recommendations for the use of DDT insecticides, it is not practical to estimate the effect these new materials will have on the use of various standard insecticides. It may be expected, however, that DDT insecticides will be used for some purposes and in some sections and for some pests heretofore controlled by lead, calcium arsenate, cryolite, rotenone, and pyrethrum. There is, however, no reason to believe that DDT insecticides will replace much more than 25 percent of the amounts of these materials used for any specific purpose. Various formulations of DDT will be used to combat some pests which heretofore have not been adequately controlled. But it would be a grave error for farmers or others to think that DDT insecticides will solve all insect problems, or eliminate the need for other kinds of insecticides.

S. A. ROHWER, BE&PQ



Secretary of Agriculture Anderson says: "The financial stability of agriculture for the next 25 years will be determined in a large measure by the way farmers use their expanded wartime income. I cannot urge them too strongly to keep on saving, buying and holding United States bonds until the danger of inflation is over."

## LUMBER

THE V-J day lumber cut-back in military requirements, equal to 11 billion board feet annually, is expected to more than double the lumber available for civilian construction in 1946, if production reaches at least 30 billion board feet next year, approximately the amount produced in 1945. This additional supply will permit an expected increase in residential construction which may absorb 5 billion board feet, an increase in nonresidential construction absorbing 3.5 billion and an increase in farm construction of 2.5 billion board feet. Farmers would then get a total 5 billion board feet in 1946, twice the amount available in 1945 and about what they used in 1929.

Those who expected that the V-J day cancellation meant more lumber immediately available for civilian uses have been disappointed. The canceled orders were for lumber still to be manufactured. When manufactured, the lumber will flow through normal civilian channels, but will require some time to reach the consumer. Until this new supply reaches the local dealer in sufficient quantity to start building up his low stocks, the purchaser will find difficulty getting what he needs.

Many thought lumber production in 1945 would pick up along with the arrival of peace and an accompanying easing of labor and equipment shortages. But this has not happened, mainly because of strikes and continued manpower shortages. And so production for the last 4 months of the year may show more than a seasonal decline.

The lumber industry has few reconversion problems so that production during 1946 will probably exceed that in 1945, but it may not provide for much rebuilding of stocks. Increasing difficulties in obtaining stumpage are likely to limit the expansion of lumber production. If unforeseen developments keep lumber production from

expanding as expected, or if demands for lumber increase materially, stocks will remain short. The lumber market will still be more a seller's than a buyer's market.

Lumber stocks have had to be drawn on heavily to meet wartime needs so that total stocks of both producers and distributors dropped from 17.3 billion board feet on December 31, 1941, to 6.5 billion on December 31, 1944. These stocks will have to be built up in order to effectively meet future demands. That is, production will have to provide for stocks in addition to actual consumption.

The farmer, along with many other users, is dependent upon retail distributors for lumber, but retail stocks were down to 1.82 billion board feet on July 1, 1945, compared with normal stocks of about 6½ billion board feet. The situation will improve as new supplies move into normal channels, so that the farmer will not have to take what he can get, as he has had to do in the emergency. He will get much more lumber than during the war but still must expect to have some difficulty getting seasoned stock, and special items, so long as lumber moves out of the yard as fast as it comes in.

F. H. HALLAUER, *Forest Service*

## FARM SUPPLIES

**F**ARM supplies as a whole are expected to be more readily available in 1946 than they have been in 1945 or any of the war years.

The majority of building materials should be more plentiful, but in some areas it is possible that heavy demands will create temporary shortages. A wider selection of materials for construction should also be available than when wartime restrictions were in effect. The supply of metal roofing which has been consistently short during the war, is expected to increase in the coming months. The various lumber substitutes should also be more plentiful than during the

past year. Supplies of plumbing and heating equipment are expected to be generally adequate to meet farm demands during 1946.

Screen wire supplies for civilian use have been short during the war, but should be sufficient to meet all farm demands in 1946. Copper wire for farmstead wiring should be available in sufficient quantity to meet the needs of an expanding rural electrification program. Construction of power lines is more likely to be limited because of inadequate supplies of poles than because of lack of other materials.

Supplies of barbed and woven wire fencing in 1946 are expected to be larger than the relatively large supplies of 1944 and 1945. Adequate supplies of nails, staples, and bale ties are expected during 1946. The supply of farm and garden hand tools and mechanics' tools should be entirely adequate.

Electric motors of all sizes should be more readily available during 1946 than they were in 1945. The industry now has production capacity adequate to take care of reconversion demands as well as normal civilian requirements. However, single phase motors will be in short supply for several months.

The production of pressure canners in 1946 will probably not exceed the 600,000 units manufactured in 1945 because that number represents practically the entire capacity of the industry. All restrictive WPB orders affecting the production of farm freezers have been removed, and it is anticipated that limited quantities will be available early in the summer of 1946. Restrictions on both tubular and immersion types of milk coolers have also been removed, and manufacturers can undoubtedly produce more in 1946 than the 15 000 units produced in 1945.

Supplies of binder twine were adequate in 1945 when inventories, new production, and imports accounted for approximately 157 million pounds. A



severe 3-month drought in Mexico has drastically reduced supplies of istle and henequen that normally would be processed into binder twine for the 1946 season, but it is hoped that improvement of the situation in the Philippines will make it possible to offset this loss with imports of manila and sisal fibers.

W. D. McAFEE, FMA

## CREDIT

FARMERS generally are entering a period with greatly expanded financial reserves that should materially help in making needed production adjustments and in cushioning some of the possible economic shocks in the return to peacetime markets. At the beginning of 1946 they will have cash and bank deposits totaling 12 billion dollars or more. In addition, their holdings in war bonds will be in excess of 4 billion dollars. Furthermore, farm-mortgage debt, now forecast for January 1, 1946 at around 5 billion dollars, will be lower than at any time since 1915. The short-term debt, in relation to heavy wartime expenses, will also be at a conservative level.

Whether this relatively favorable financial situation continues during 1946 depends on many unpredictable economic factors. It appears, however, that by the beginning of next year agriculture will have passed its high point in financial liquidity. Shortages and restrictions which have curbed farm spending will largely have been eliminated. Farmers may be expected to make improvements to land and buildings, purchase new machinery, buy automobiles and acquire many furnishings and items of equipment for the home. This increase in investment in agriculture will be greatly enlarged if there is any appreciable "back to the farm" movement by returning war workers and servicemen. For some farmers the increased spending will involve using accumulated

savings; for others, the incurring of indebtedness.

These disbursements will tend to retard the rapid increase in farmers' cash and bank deposits which has characterized the war period and such holdings may even decrease if expenditures on plant and equipment are substantial. War bonds, however, will likely be cashed only in event of purchase of a farm, major farm improvement or in case of an emergency. The total farm-mortgage debt will probably turn upward if there is a continuance of a large volume of farm real estate purchases at high prices, especially if surplus funds are used largely for purposes other than to reduce existing mortgages. The short-term or working-capital debt of farmers, however, may show the sharpest rise as a result of financing internal farm expansion and fulfilling the shortage of goods.

Lenders financing farmers have large amounts of loanable funds and interest rates continue at low levels. Private lending institutions are in sound condition, with sizable investments in liquid Government bonds. In addition, the Federal and federally sponsored agencies are available avenues of expanding loans to farmers in event of any possible credit stringency.

The danger during the immediate transition period appears to be one of too much credit rather than too little. Even in the present situation of a low total farm debt there are many with heavy loans. The average size of new loans—both mortgage and short-term—has continued to increase throughout the war. This trend may continue and possibly be accelerated throughout 1946. With a continued high farm income, the repayment of these debts, in general, will not be difficult. But in event of a substantial decline in prices of farm products, a large number of farmers, particularly the newcomers and the low-income groups, may find themselves burdened with debts that cannot be paid out of current incomes.

N. J. WALL, BAE

## LAND VALUES

**D**URING the coming year it is possible that some of the forces operating to increase land values may be moderated somewhat by the end of the war. Value curbing influences will come increasingly into play, but, on the whole, the stimulating forces appear sufficiently strong to dominate for at least another year. While the volume of sales may be down a little from the high levels of the past few years, a further value advance of moderate proportions is probable.

For the country as a whole, an increase in average values in the neighborhood of 5 to 10 percent may be expected during the year ahead. A rise within this range would be considerably under that of the past 2 years and far short of the increase that occurred immediately following World War I. Different regions no doubt will exhibit varying rates of changes, and possibly may develop divergent tendencies in land prices during the next year or two.

The principal forces stimulating value increases in recent years that are likely to continue during the coming year include: (1) record accumulations of savings in highly liquid form, (2) relatively high farm income levels in 1946 not greatly under those of the war years, (3) highly favorable rates of return on land investments, and (4) abundant credit available at low rates of interest. Increased buying pressure associated with the war's end may come from returning veterans and war workers. Strengthened demand from various sources may develop as a result of more limited industrial employment opportunities

during reconversion, reduced incentives for maintaining savings in war bonds, and the easing of machinery and labor shortages. Inflation hedges and quick profit motives may also become more significant during the transition period of uncertainty with respect to the general price level.

Operating to curb more rapid value increases will be (1) a very moderate easing of supply because of some back-log of retirements of elderly farmers, (2) increasing realization that the number of remaining high income years arising out of the war may be limited, and (3) cautious attitudes stemming from a recollection of the World War I land boom and its consequences. Educational and informational programs by public and private agencies will strengthen these cautionary attitudes and contribute toward the development of a calculated skepticism toward land value levels that appear to be unduly dependent upon the continuation of prevailing wartime incomes and prices.

While the curbing forces appear sufficiently strong to prevent an extremely sharp rise during the next year, such as occurred after World War I, the cumulative effect of a creeping but steady rise may have ultimate serious consequences. Except for possibilities of farm prices being sustained at or above wartime levels, or substantial reductions in capitalization rates, values in many areas are already beyond the longer term levels likely to be maintained. Later readjustment problems will be further aggravated if land values continue to advance from present levels.

M. M. REGAN, BAE

## Farm Family Living Prospects in 1946

**W**HEN farm families decide how they will spend their money next year, they will set, to an extraordinary

degree, the pattern of their welfare for several years to come.

During the war, many farm families

had larger incomes than ever before. In spite of shortages, some of these families were able to have better clothing, better housing, and more of other things than they had been able to afford in peacetime. But for the most part, shortages curtailed their buying and they reduced their debts or increased their savings. In the last 6 years, farm real estate mortgages have been reduced about 1.5 billion dollars and farmers have increased their bank deposits, currency and war bonds from 4.3 billion dollars to about 10 billion dollars. The financial position of farm families probably will be even better at the beginning of 1946.

However, supplies of many commodities, particularly certain types of clothing and equipment, still will be far short of demand next year. Farm families could easily wipe out most of their savings if all price and rationing controls were abandoned and if they were to bid against other farm and city families for these scarce supplies. They will have to decide how much to spend next year, and how much to save for expenditure in later years. Of the amount they spend in 1946, they will have to decide among different goods (for example, clothing, automobiles, machinery, and household equipment), improvements such as electrification, medical expenditures, additional education for their children, better community facilities, and many other different classes of expenditures.

Some of the things farm families want to buy with their savings and their higher-than-usual incomes will require group action. Only by joining together with their neighbors and with other neighborhoods can they obtain hospitals where none now exist, or better schools, churches, recreation centers, electric power and telephones. As citizens, farm families help to determine State and national policies affecting levels of rural living: for example, policies pertaining to employment, price levels, social security,

vocational education, and even farm tenure laws to encourage families to improve their own housing.

There are likely to be many official and unofficial budgets that will spell out the kind and quantity of food, clothing, medical and allied services and other factors of a minimum adequate standard. Congress has asked the Bureau of Labor Statistics to prepare a budget for wage earners. All budgets will include things shown by science to be needed for health. In addition, they will provide for other things essential because of custom and habit. These budgets will be used to measure progress from time to time in levels of living; to compare levels within and among communities, as a basis for determining minimum wages, pensions, and relief allowances; to estimate the potential market for various products if everyone had at least the minimum standard. They also have a place in helping families to set goals for their own living and to choose wisely in using their resources.

Ideas about minimum standards, about things needed for various levels of adequacy, seem certain to become increasingly important in public policy. For example, the concept of minimum food requirements and farm housing programs will undoubtedly be carried out in terms of a "minimum" standard. Because of their increasing importance, discussion of these concepts at the "grass roots" is needed. Such discussion will contribute to the formulation of sound workable standards for national, State and local policies. Furthermore, a discussion of adequate standards for food, housing, health services, clothing and other things provides an excellent means of disseminating facts about adequate levels of living and ways in which farm families might help themselves or join with other families to get conditions in which higher standards are more probable.

MARGARET G. REID, *Bureau of Human Nutrition & Home Economics*

## FARM FAMILY INCOMES

**T**HE incomes of farm families as a whole are continuing at a very high level. Realized net income to farm operators from agriculture and Government payments probably will amount to nearly 13 billion dollars in 1945, or 3 percent above the net income of 12.6 billion dollars in 1944. In 1946, net income may decline to about 11 billion dollars. Net income represents the amount remaining to farm operators after production expenses, including maintenance and depreciation on capital investments, are subtracted from gross farm income. In addition to money income, it includes nonmoney income in the form of food and fuel raised on the farm and used by the farm family, as well as net rental value of farm dwellings.

Net cash available to farm operators after cash expenses will amount to about 10.3 billion dollars in 1945, compared with 10.1 billion dollars in 1944. Net cash available to farm operators may drop to somewhat over 8 billion dollars in 1946, reflecting the sizable expenditures on buildings and machinery which are anticipated for next year.

In addition to their net cash available from agricultural operations, farmers will have in the neighborhood of 4 billion dollars of nonagricultural income in 1945. Moreover, they have large amounts of savings to draw on. On January 1, 1945, bank deposits plus currency held by farmers totaled 11.6 billion dollars, about one-fifth more than on January 1, 1944. By January 1, 1946, this total may be up to about 12 billion dollars. In addition, United States savings bonds in excess of 4 billion dollars probably will be held by farmers on January 1, 1946. With some reduction in income taxes in prospect for 1946, the amount of cash available to farmers for family living in 1946 may be nearly as great as in 1945.

This generally favorable situation for 1946 means that many farm fam-

ilies will be in a position where they can install electricity, make major improvements in their homes and other farm buildings, and obtain new equipment. More families than ever before will be thinking of a college education for their children. Though incomes in general are good, they are not uniformly high, and in some States they are still very low.

H. C. NORCROSS, BAE

## FOOD FOR HOME USE

**H**OME food production and preservation will continue to provide the major part of the farm family's food in 1946. However, with the wartime pressure removed, there is bound to be some decline in the volume of food grown and preserved for home use. This will be particularly true of farm families in higher income groups. For low-income families, home food production and preservation provide the only way of obtaining even a minimum adequate diet.

For all rural families, home-produced food will continue to pay dividends in better nutrition and cash savings. In most regions home-produced foods such as fresh eggs, milk, butter, meat, and a variety of vegetables and fruits supply the protective vitamins and minerals so necessary for good diets. In the spring of 1942, home-produced food furnished farm families with three-fourths of the calcium, vitamin A and riboflavin consumed, and about half of the other dietary essentials. A much higher percentage of farm than urban families had good diets. Furthermore, there was a difference averaging \$4 per family per week between farm-furnished food consumed valued (1) at farm prices and (2) at prices paid by those farm families who bought rather than raised.

Food preservation and storage will continue to be important if families are to have satisfactory year-round diets. There will probably be rapid

developments in group enterprises to preserve food more efficiently. In recent years, community canning centers have proved very successful in many localities. During the war the number of frozen food locker plants increased in spite of shortage of construction materials, with considerable increases occurring along the Eastern Seaboard and in the South. A further increase of considerable magnitude is expected in the years ahead. With the extension of electric power, many more rural families will probably build or buy home freezing units.

In March 1945 one out of every four school children in the United States was receiving lunch at school, and in 1946 the school lunch will expand to many more communities. But from the number of applications already received it appears that the demand for assistance may exceed the funds available. It is probable that more rural schools can participate in this program as more kitchen equipment becomes available and as consolidation of rural schools increases.

FAITH CLARK, BHN&HE

## HOUSING AND HOME EQUIPMENT

**W**ITH farmers expected to get about 5 billion board feet of lumber, twice the amount available in 1945 and about what they used in 1939, they could build around 140,000 new houses in 1946, compared with probably only 60,000 in 1945. In addition, the supply of other building materials, as well as plumbing, heating and similar equipment, is expected to be generally adequate to meet farm demands next year though there may be temporary shortages in some areas in the next few months. This should be a further stimulus for new farm home construction even though lumber supplies will not be fully adequate for many months to come.

Surveys in recent years reveal a widespread interest in rural home im-

provement. A survey made a year ago reports that one in every twelve farm families intended to build or buy a new house when restrictions were lifted. And a larger number of rural families are expected to repair or remodel old houses.

The rural electrification program has gone far toward bringing electricity to the farmer, but in other respects farm construction has not kept pace with modernizing of urban structures. The situation is emphasized by comparison of farm housing with urban housing as to sanitary facilities, equipment, state of repair, and overcrowding.

Houses constructed from now on for some time will, in all probability, cost considerably more than before the war because of increased material and labor costs.

### Electrification

Nearly a half million strictly rural dwelling units, now unserved, are expected to be supplied with electric power during 1946, probably the greatest number in any 1 year. Of the 5½ million rural homes now without electricity, nearly 3½ million probably will be connected in the next 5 years. More than a billion dollars and 521,000 man-years of direct and indirect labor will be needed to get these lines built. Private utilities, REA-financed cooperatives, and public agencies all are expected to have a part in this development.

For itself alone, REA had laid out a 3-year program by which it expects to bring electric service to 1,300,000 rural families—about as many as it has connected from the beginning of its existence until now. It is expected that REA-financed cooperatives will borrow and use \$579,000,000 to construct the lines and facilities for this expansion.

### Home Equipment

Raw materials for most household furnishings and equipment are abundant, but the availability of the fin-

ished products in 1946 depend mainly on the ability of manufacturers to produce enough to build up stocks in retail outlets. Small articles, such as electric irons, alarm clocks, and aluminum utensils, are already available in limited quantities, and may be fairly plentiful in early 1946. But manufacture of the larger articles, including electric washing machines and refrigerators, is somewhat slower because of the amount of material and labor required to make them. Production of civilian articles in general is expected to surpass the prewar rate by the end of 1946.

Even with a high rate of manufacture it will take a long time to satisfy the pent-up demand for household appliances. Many wishing to buy will have to wait, but those who wait may benefit from later improvements in designs.

It is probable that the price of most household equipment will be slightly higher than before the war.

EMMA G. HOLMES, BHN&HE

## CLOTHING

**E**XTREME shortages of most clothing should disappear in 6 months. As clothing supplies increase, considerable improvement in quality of many lines may be expected. Prices in the immediate future will depend on whether or not price ceilings are relaxed.

Cutbacks in military orders for woolen, worsted and rayon fabrics late this summer made it possible for manufacturers to start work on increased supplies of civilian overcoats, men's suits, rayon dresses, rayon underwear and other articles. These garments should begin to appear in retail stores in some volume between November and January, and cotton apparel should become more plentiful a few months later. Essential clothing for children and workers, particularly in the low-price lines, is expected to become more

plentiful. More leather shoes for civilians will be manufactured in the coming months as a result of military cutbacks, and more and better footwear is already on the market. Production will increase as more labor becomes available.

RITA J. HOLMES, BHN&HE

## AUTOMOBILES

**R**ESUMPTION of automobile production for civilian use in the latter part of 1945 is expected to result in an output of nearly a quarter of a million new cars by the end of this year. In 1946 the automobile industry hopes to reach an annual production rate of 4 to 5 million cars. But it may be a year or two before a new car will be available to everyone wanting to buy one. Cars were scrapped during the war at the rate of 4,000 a day, which is roughly 5¾ million for the 4 years from the beginning of 1942 through the end of 1945. Add to this the large number which will be scrapped in the coming year and it becomes apparent that it will be some time before new production will offset these scrapped cars.

Although dealers may give preference to persons showing essential need for some months ahead in the purchase of new automobiles, an appreciable proportion of the 1946 production is expected to be available in rural areas.

The 1946 cars will be as good quality as prewar models, but there will be fewer styles to choose from than in the past. New models will have a few body changes over the 1942 cars, a little different interior design and some engine changes. The new cars may cost about the same as new ones did in early 1942, when price ceilings were established. Prices at that time were 15 to 20 percent more than equivalent models in 1941.

A large proportion of passenger car tires will be synthetic, at least till crude rubber imports are resumed in

some volume. Although the supply of new passenger car tires will not be adequate to meet all requirements in early 1946, production by the middle of the year should be sufficient to satisfy most needs.

RITA J. HOLMES, BHN&IIE

## EDUCATION

**C**HANCES are strong that by next fall the quality of teaching in rural schools will be much improved over that of the war. The wartime shortage of teachers is expected to be eased considerably in the coming year, but the extent to which it is will depend in large measure on the salaries offered in comparison with industrial and business opportunities in urban areas. Partial or complete return to prewar standards in granting teachers' permits, temporarily relaxed during the war, should help improve the quality of education given rural children.

Consolidation and reduction in the number of one-room schools is expected to continue at an accelerated pace during 1946 and the years immediately ahead. As building materials and labor become available there will probably be more and more construction of multiple-room school buildings under public works programs. And as new school buses become available and highways are improved, better transportation to schools is bound to follow.

### Veterans

Educational opportunities for rural veterans in 1946 will be much improved over those available in the last year or so. This will be particularly true for rural veterans seeking pre-college educational benefits. For those entering or returning to college there will be ample opportunities in the various agricultural colleges or general universities, as in the past. But for those who have not finished grade school or high school, a Nation-wide program, sponsored by several State and Federal agencies and soon to be

put into effect, is designed to meet their needs. Because most of these veterans do not want to go back to school with younger students, this program will enable them to finish their primary education so that they may go on to college later if they so desire. These veterans will be able to live and work on the farm while receiving supervision and instruction from vocational educational personnel. Vocational teachers will spend a specific number of hours in training individual veterans right where they are, on the farms. In addition, supplementary class instruction will be provided at central locations in their own communities. Local advisory committees will make sure the instruction meets the test of judgment of both dirt farmers and trained professional people. It is hoped that this program will help many rural veterans, not now being served, to exercise their privileges under the GI bill of rights.

E. A. SCHULER, BAE.

## RURAL HEALTH

**R**URAL health facilities in 1946 will continue to be very scarce. Inadequate before the war in many rural areas, the condition was aggravated by the draft of many rural doctors, dentists, nurses, and sanitary engineers into the armed forces during the past 3 to 4 years. Prospects of the situation improving now that the war is over are not encouraging. Doctors, dentists, and nurses are not being released from the service as rapidly as some hoped; many doctors who are released are going to school for refresher courses, and many doctors are not returning to their former rural communities but to urban areas where they find the prospective income more attractive and facilities more adequate.

The need for a health program has long been recognized in America's rural communities and beginnings have been made. Many county hospitals

have been built, public health units have been established, hospital insurance has expanded. Cooperative associations have built hospitals, that serve as health centers, and provide salaries sufficient to attract competent doctors, dentists, nurses, and technicians. Prepayment plans have been tried both by public and private agencies.

The shortage of health services during the war and the widespread defects indicated by the physical examinations under the Selective Service Act, under which about a third of the men from rural areas were rejected, have increased the desire to have adequate health services within the reach of all rural families. But there seems little likelihood of much progress unless leaders in communities take stock of their own situation to determine the cause for the shortcomings of their health facilities.

Right now the presence of community committees may prove to be a major advantage. There are surplus supplies of medical, dental, and hospital equipment that can be secured at low cost by communities prepared to take advantage of them. Organization to do so may be the starting point of a larger effort. The immediate postwar period offers a unique opportunity to rural America to work out an organized effort to assure distribution of these surplus materials, but it will require mobilization of rural community action on a very broad scale.

Construction of modern rural hospital and health centers is a prerequisite to attracting and distributing health personnel and to assuring a high quality of health services. An expanded public health program must go hand in hand with this construction program if preventable diseases are to be markedly reduced. A social security program, to include health insurance, covering rural groups who are now excluded, would aid in securing and maintaining needed health facilities and services in rural areas.

K. E. FOHLMANN, FSA

## FARM POPULATION

THE farm population comes out of the war not only lesser in numbers than before the war, but also with a different age composition than it has ever had. Between 1940 and 1945, the number of persons living on farms decreased by 5 million or more than 15 percent. This decrease was heavily concentrated in the middle age groups, particularly among men. During the period 1940-44 there was a loss of 40 percent in the number of males between 14 and 24, and a drop of over 20 percent in the number between 25 and 44, but the number of persons 45 years and older remained about the same.

Population adjustments are to be expected in the immediate future. Some demobilized service men and industrial workers will return to agriculture. This is likely to bring back a relatively large proportion of males in the middle age group, a reversal of the trend during the war. How many will return depends largely upon employment opportunities. Migration out of and to a lesser extent into agriculture responds sensitively to economic opportunities elsewhere. If, therefore, non-farm opportunities are on a high level in the next several months, relatively few veterans and civilians now in industry will return to farms. If widespread unemployment exists there will probably be considerable shift of people to farms.

Shifting to nonfarm jobs or combining them with farming has been an important means of raising the level of living of farm families. The amount of nonfarm work done by farm operators during 1943 was 36 percent greater than in 1939, while the wage income from such work increased by a much greater percentage.

C. C. TAYLOR, BAE

●  
If you invest enough in Victory bonds to pay for 3 years of college for a child, Uncle Sam will pay for the fourth year. Victory bonds in 10 years pay \$4 for every three invested.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All live-stock
1910-14 average.....	58	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	153	151	150	148	148	154	163	158
1920-24 average.....	75	122	180	161	173	178	159	103	123	112
1925-29 average.....	98	129	143	153	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	162	234	139	150	148	212	162	146	171	164
1941.....	162	160	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	322	151	167	162	264	193	190	209	200
1944.....	235	329	152	176	170	315	198	174	200	194
1944-October.....	232	326	152	176	170	325	201	190	201	199
1944-November.....	232	321	152	177	171	-----	203	207	200	202
1944-December.....	232	326	153	178	171	-----	203	211	198	202
1945-January.....	234	326	153	179	172	324	202	199	203	202
1945-February.....	230	324	154	179	172	-----	200	183	209	201
1945-March.....	235	322	154	180	173	-----	198	175	211	200
1945-April.....	230	314	154	180	173	335	194	176	215	201
1945-May.....	226	302	155	180	173	-----	192	179	217	202
1945-June.....	220	301	155	180	173	340	191	169	216	203
1945-July.....	211	280	155	180	173	362	192	197	215	205
1945-August.....	187	261	154	180	173	-----	195	207	212	206
1945-September.....	172	-----	154	181	174	-----	197	201	207	203
1945-October.....	-----	-----	-----	182	175	355	190	204	202	202

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>3</sup>	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops			All crops
1910-14 average.....	100	101	102	96	98	99	-----	99	100	100
1915-19 average.....	193	164	187	168	187	125	-----	168	162	166
1920-24 average.....	147	126	192	189	140	148	143	160	151	86
1925-29 average.....	140	119	172	145	120	141	140	143	149	89
1930-34 average.....	70	76	119	74	72	94	106	86	90	66
1935-39 average.....	94	95	175	83	106	83	102	97	107	84
1940-44 average.....	123	119	245	131	159	133	172	143	154	103
1941.....	97	89	159	107	130	65	120	106	121	94
1942.....	120	111	252	140	172	114	163	142	150	106
1943.....	148	147	325	180	190	179	245	183	192	119
1944.....	165	166	354	164	209	215	312	194	195	115
1944-October.....	164	161	367	171	211	205	153	187	194	114
1944-November.....	165	157	368	168	215	195	188	180	196	115
1944-December.....	167	160	364	168	215	206	226	196	200	117
1945-January.....	169	163	365	163	214	205	212	200	201	117
1945-February.....	169	164	360	161	215	211	223	197	199	116
1945-March.....	171	166	359	163	215	211	203	196	198	114
1945-April.....	172	162	362	163	215	221	250	204	203	117
1945-May.....	172	161	363	165	216	227	193	198	200	116
1945-June.....	173	162	364	169	217	237	260	210	206	119
1945-July.....	169	161	364	171	221	237	244	207	206	119
1945-August.....	167	158	367	172	215	214	240	202	204	118
1945-September.....	167	157	365	175	213	217	159	191	197	113
1945-October.....	175	160	373	180	210	210	181	196	199	114

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income adjusted for seasonal variation, revised September 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

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*A Brief Summary of Economic Conditions*

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THE first peacetime New Year in half a decade finds American farmers with another year of top production—1945 saw a total production nearly a third above prewar (1935–39) average despite much unfavorable weather. For this achievement Americans and others are grateful. It means that the United States will face the coming year without the specter of mass hunger and even starvation that threatens much of the globe. \* \* \* Aware of the plight of agriculture in most of the war-devastated countries as well as an expected strong domestic demand, American farmers contemplate a high level of production in 1946, though many want to ease up on the intensive cropping necessitated by war demands and return to long-term soil-building practices. The 1946 agricultural goals are planned with this in mind even though the acreage called for is more than was grown in 1945. Acreages of some crops, especially sugar, flaxseed and food and feed grains, are maintained at wartime levels. \* \* \* Virtually all wartime subsidies on foods are now planned to be terminated on or before June 30, 1946.

## FAO: A Look Ahead

**A**LMOST everyone who took part in the recent Food and Agriculture Conference at Quebec left with a feeling of accomplishment—that a start had been made toward better diets for the world's people and better living for the world's farmers, forest producers and fishermen, and toward solving the old riddle of want amidst plenty. Yet actually the conference did only a few things. Why the widespread optimism?

The bare facts of the establishment of the Food and Agriculture Organization of the United Nations are soon told. The conference in Quebec last October had three chief results. First, FAO was called formally into being. This was accomplished October 16, the first day of the conference, when representatives of 30 nations signed the constitution. Before the conference closed, membership had risen to 42.

Second, FAO was organized. The conference unanimously chose a truly great director general—Sir John Orr of Great Britain, world-famed nutritionist and agricultural scientist, distinguished scholar, successful farmer, experienced legislator, and forward-looking humanitarian. It elected a 15-man executive committee to direct FAO policy between the annual conferences. Andre Mayer, vice president of the College de France, was named chairman of the committee.<sup>1</sup> It decided that the temporary seat of FAO shall be in Washington; and the permanent seat whatever headquarters is chosen by the United Nations Organization.

Third, the conference laid down general sailing directions for the executive committee and director general. While these directions did not attempt to foresee and provide for every detailed situation that might arise in the next 12 months, they did set the course of FAO activities,

particularly for the first year. For example, there were specific recommendations for prompt preparation of a world-wide picture of the food and agricultural situation, and for pointed, practical recommendations as to how improvements can be made, especially in making apparent surpluses of one area serve human needs of other areas.

FAO has been created, has organized, and has set a general policy for its first year. Beyond that, all remained conjecture when the Quebec conference closed. Even today much still is conjecture, though FAO has begun to build its staff and make a start on its first project—the world balance sheet of food production and supply, country by country. Many questions as to who will be on the organization's staff, just what they will attempt to do, just how they will operate, and how much good will come of their efforts can better be answered next year or the year after.

Yet there are solid reasons for the hope that FAO will help the people of the world and will begin to make its influence felt in a relatively short time. One could read the signs at Quebec—the caliber of the delegations, their attitudes, and the way they went about their work.

The nations sent their best. Many of the world's leading administrators in the fields of food and agriculture were grouped around the chief delegates' table when the conference met in plenary session—U. S. Secretary of Agriculture Anderson, and four other ministers of agriculture of member nations, besides other Cabinet members and top-rank officials. Behind these top administrators sat dozens of the world's best scientists and economists in fields touched by FAO.

It was evident that the nations which had sent those leaders were bent on making FAO a living force for good. "We know that the peace

<sup>1</sup> The author is vice chairman.—Editor.

can be won," President Truman said in a message to the conference. "One of the major victories can be won at Quebec." From start to finish the same theme ran through the words and action of the delegates from all countries.

The way the conference dispatched its business was encouraging. Full discussion, often marked by frank differences of opinion, was the rule in committee work, yet the differences never obscured agreement on fundamentals or willingness to compromise on minor points. Like all large gatherings, the conference divided and subdivided into commissions, committees, and panels for handling specific assignments. Work flowed from the plenary session to the smaller groups, and then back again for final review and approval.

The reports of the committees—which taken together constituted the sailing directions for the organization—hold great promise. Most of the recommendations were clear and down to earth. They took into account the fact that FAO is primarily an advisory and research organization, but they recognized that not being an "action" agency did not remove the need for being active. If FAO follows the course laid out for it, it will do far more than gather some facts and issue some reports.

For instance, one of the first tasks FAO has set for itself is gathering and making available a clear picture of the world food situation—where the needs for various products are greatest, where the greatest apparent "surpluses" exist or are likely to appear. That is just a beginning. FAO is expected to make clear-cut recommendations on how to remedy bad situations through better production or distribution. It will receive reports from member nations on how well its recommendations have been carried out. It will help see they are carried out through organizing "missions," that is, groups of experts in particular fields to help individual countries do such

things as improve dairy herds, or start nutrition programs or set up better extension services.

The character of the first director general is another portent of FAO's future. At 65, Sir John Orr has a long-standing reputation as a nutritionist and recently added to his stature as one of the policy makers of the food programs that raised the general level of the British diet even while food imports were blocked off by war. From 1913 until his election to Parliament this year, he was director and moving spirit of the Rowett Institute of Animal Nutrition. Besides being interested in the Institute's 1,000-acre stock farm, Sir John owns and operates a large general farm in his native Scotland.

The nutritionist, the farmer, and the humanitarian in Sir John all came out in his acceptance speech, delivered in his rolling Scotch burr. "All the governments," he said, "have agreed to cooperate in a great world food scheme, which will bring freedom from want to all men, irrespective of race or color \* \* \* If the nations of the world are going to get together to feed the people of the world, they must increase the production of the most important foods. In many cases, that production must be more than doubled \* \* \* There should be no slump in agriculture after this war, such as after the last war \* \* \*"

Those were some of the reasons why people left Quebec with a sense of accomplishment and hope, even though the actual work of FAO remained to be done. One persistent question which had bothered some of the delegates from the United States and other great food-producing nations had been faced frankly. It was this: "What can we expect to get out of FAO?" There are several answers. This country can learn much from other countries about both nutrition and farm production. The exchange of scientific and technical information will not be a one-way street, though it is likely that in the long run the United

States will give more than it receives along those lines. This country's most urgent problem, however, is finding markets for the huge volume of farm and industrial goods that can be produced. That is where it can expect real help from FAO, through its studies of world-wide market possibilities and through its recommendations of the best ways to get food to where it is needed and generally to expand world trade.

It can help most of all through helping the people of the less developed countries to produce more. That is the only way they can afford to buy from America. Suppose their increased production is in agriculture? Sir Girja Bajpai, India's chief delegate, answered that question with one statistic. "The average yearly income of a farm family in India," he said, "is about \$22.50 a year. Our country is not buying anything worth speaking of from you now. Neither are we raising enough to feed our people. When we are producing more we will be much

more likely to buy from other countries."

The strictly economic possibilities of FAO, important as they are, fade before FAO's possibilities for helping solve the overtowering problem of our time—that of keeping the peace. We have pinned our faith on the continued cooperation of the United Nations. FAO is the first of the new permanent specialized organizations being forged as instruments for working toward that end. It will serve as a model and a testing ground.

Sir John knows this well. In his first press conference as director general he said: "FAO is the world's answer to the atomic bomb. If nations can't get together on food they can't get together on anything else. If they can, they will open the way toward the other lines of cooperation that are essential to prosperity and peace."

HOWARD R. TOLLEY, *Chief  
Bureau of Agricultural Economics*

## Commodity Reviews

### LIVESTOCK

THE original "roll-back" subsidy of \$1.30 per 100 pounds paid to hog slaughterers is now scheduled to end not later than March 31, 1946. The remaining subsidy paid to slaughterers amounting to 40 cents per 100 pounds is to end not later than mid-year 1946. By June 30, 1946, all subsidies on cattle, both to farmers and to slaughterers except the special payments to nonprocessing cattle slaughterers, and direct payments on sheep and lambs sold for slaughter are scheduled to be withdrawn.

Returns to farmers from sales of hogs and cattle in the first half of 1946 are likely to continue near present levels. However, returns from sales of

lambs probably will average higher during the first half of 1946 than a year earlier because of larger subsidy payments which began last August. Hog prices may decline moderately from present levels in the late spring and early summer during the period of peak marketings of the large 1945 fall pig crop.

Cattle feeding probably will be larger this winter than last and it is likely that a larger-than-usual proportion of the cattle fed will be marketed in the late winter and early spring, with a large number to be finished on soft corn. But production of the better grades of beef in the first half of 1946 is not likely to exceed the demand at near current prices.

Production of meat in the first half

of next year may be moderately larger than a year earlier. Demand for meat by civilians will continue strong with the end of rationing and continued high consumer incomes. Comparatively large quantities of meat will be required for export to Europe. And military purchases, though way below a year ago, will add to the total demand.

## POULTRY AND EGGS

**E**GG production in the first half of 1946 is expected to be about the same as in the first half of 1945 and the number of hens and pullets on farms January 1, 1946 will be at least as large as a year earlier.

Civilian demand for eggs is expected to remain fairly strong, although it will be weaker than in the first half of 1945 when consumer income was at a record level and when red meat supplies were short. Military de-

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1935-39 average.... <sup>1</sup>	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	180	106
1943.....	192	162	119
1944.....	195	170	115
1944			
November....	196	171	115
December....	200	171	117
1945			
January.....	201	172	117
February....	199	172	116
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116
June.....	206	173	119
July.....	206	173	119
August.....	204	173	118
September....	197	174	113
October.....	199	175	114
November....	205	175	117

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Nov. 15, 1944	Oct. 15, 1945	Nov. 15, 1945	Parity price Nov. 15, 1945
	August 1900-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.43	1.51	1.53	1.55
Rice (bushel).....do.....	.813	.742	1.20	1.70	1.83	1.42
Corn (bushel).....do.....	.612	.601	1.06	1.13	1.11	1.12
Oats (bushel).....do.....	.390	.340	.662	.628	.679	.698
Hay (ton).....do.....	11.87	8.87	15.00	14.30	14.90	20.80
Cotton (pound).....cents	12.4	10.84	20.78	22.30	22.52	21.70
Soybeans (bushel).....dollars	2.96	.984	2.05	2.06	2.09	\$1.68
Peanuts (pound).....cents	4.8	3.55	8.08	8.08	8.30	8.40
Potatoes (bushel).....dollars	.697	.717	1.43	1.26	1.31	1.28
Apples (bushel).....do.....	.96	.90	2.10	2.84	3.08	1.68
Oranges on tree, per box.....	1.81	1.11	2.07	2.05	2.05	\$2.05
Hogs (hundredweight).....do	7.27	8.38	13.50	14.10	14.20	12.70
Beef cattle (hundredweight).....do	5.42	6.56	9.79	11.40	11.40	9.48
Veal calves (hundredweight).....do	6.75	7.80	12.20	13.40	13.40	11.80
Lambs (hundredweight).....do	5.88	7.79	12.10	12.60	12.80	10.30
Butterfat (pound) <sup>1</sup> .....cents	26.8	20.1	50.7	50.2	50.3	\$48.9
Milk, wholesale (100-pound) <sup>1</sup> .....dollars	1.60	1.81	\$3.38	\$3.30	3.35	\$3.08
Chickens (pound).....cents	11.4	14.9	24.0	24.3	23.9	20.0
Eggs (dozen).....do.....	21.5	21.7	43.4	42.6	47.1	\$47.0
Wool (pound).....do.....	18.3	23.8	41.6	41.1	41.2	32.0

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under section 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

mand for eggs will be reduced, but this will not result in much decrease in demand since demobilized personnel will be added to the civilian population. However, per capita disappearance of eggs in the armed forces has run about one-third higher than civilian consumption per capita.

If exports of eggs in the first half of 1946 or production of dried eggs for export should approximate the 300 million dozen exported under lend-lease in the first half of 1945 declines in egg prices from November to the flush production season in 1946 probably will be of the usual seasonal magnitude. On the other hand, if there is little or no export demand, sharp price declines will take place, and the average price received by farmers for eggs will probably be at or near support levels.

Chicken prices in the first half of 1946 probably will be moderately below the previous year, but at about present levels. The demand-supply gap in the first half of 1945 was very wide. Civilian supplies of chicken meat will probably be near record levels, but continuation of consumer purchasing power at a high level compared with prewar will tend to prevent prices from declining greatly.

## DAIRY PRODUCTS

**E**NDING of the 5-cent processor subsidy on butter, along with an equivalent increase in wholesale and retail butter ceilings and discontinuance of butter rationing, are not expected to change the present stable prices farmers are receiving for butterfat. Although butter production is running 17 percent below last year, the Government release of 100 million pounds will provide slightly larger supplies than a year earlier for civilians during the next few months.

Prices received by farmers for whole milk sold at wholesale are likely to average a little lower in 1946 than in 1945, if price ceilings on dairy prod-

ucts are continued at present levels. But if ceilings are removed early in 1946, whole milk prices probably will average at least as high as in 1945. A further increase in or removal of butter ceilings would probably be followed by diversion of some milk to butter production and a strengthening of farm prices of both butterfat and whole milk.

Milk production for the first 11 months of 1945, even though the November output was about 10 percent below the record for October, was about 115 billion pounds, an all-time-record. Milk production per cow for the year as a whole will exceed any year on record.

## FRUIT

**A**MPLE supplies of oranges, grapefruit, and lemons will be available this winter from the large new crops of these fruits. Production of early and mid-season oranges is slightly larger this season than last, grapefruit about a fifth larger, and lemons a tenth larger.

The Florida crops of oranges and grapefruit are substantially larger than last season, when production was drastically reduced by a tropical storm. On the other hand, the California crop of navel and miscellaneous oranges is slightly smaller than last season.

The 1945-46 pack of canned citrus is expected to be slightly larger than the 1944-45 pack. Increases in canned grapefruit juice as well as blended orange and grapefruit juice are in prospect, but a decrease in orange juice is likely. Practically all of the new pack will be available to civilians in contrast to only about three-fifths of the 1944-45 pack, the remainder going to noncivilian uses.

Supplies of pears this winter will be about as large as a year earlier, but those of apples substantially smaller. Although citrus production sets a new high record for 1945, total production

of all fruit is slightly smaller than in 1944.

Civilian demand for fresh fruit continues strong. Prices for apples and pears, now taken from storage, are expected to continue at ceiling levels. Prices for citrus fruits, despite the strong demand, are expected to average lower this winter than last, because of the larger crops and greatly reduced Government requirements.

## VEGETABLES

**C**ONSUMER demand for commercial truck crops for fresh market is currently about as strong as it was a year ago, and is expected to remain strong throughout the 1946 winter season.

Preliminary indications for truck crops this winter point to a larger commercial production than last winter for lima beans, beets, cauliflower, celery, escarole, lettuce, green peas and spinach, but a smaller output for artichokes, cabbage, carrots, kale and shallots. Although the aggregate tonnage of these 13 truck crops is now expected to be 4 percent below that of last winter, it will be 44 percent above the 10-year (1935-44) average. The acreage of green peppers expected to be harvested this winter will be slightly larger than last season.

In addition to the vegetables harvested during the winter months, there will be other vegetables available out of storage. In the latter group, there will be more cabbage and carrots than a year earlier, but a smaller supply of onions.

Through the winter and early spring there will be an ample supply of potatoes from the 1945 crop, second largest on record. Prices received by farmers for 1945 crop potatoes are being supported by the Department of Agriculture's loan program. The quantity of potatoes which might otherwise be considered as "surplus"

will be reduced by the large shipments now arranged or being considered to go to Canada, Belgium, France and other countries.

This year's sweetpotato crop, about average in size, is expected to bring prices at or near ceilings for most of the season, because of the strong civilian demand and considerable military requirements.

## TOBACCO

**D**OMESTIC and foreign demand for United States tobacco, reflecting small world stocks, continues to be exceptionally strong, as the largest domestic crop ever produced is being marketed. With prices at or near the highest level ever received by growers, this year's gross income will top all previous peaks by a substantial amount.

The record 1945 crop of over 2 billion pounds now entering stocks, together with the large carry-over, makes the supply larger than a year ago, and some decline in disappearance from the present exceptionally high level in prospect may make stocks a year hence even larger. Stocks of flue-cured and burley, the major cigarette types, are above most prewar years, but they, as well as stocks of Maryland, dark, and cigar tobacco are low in relation to current and prospective requirements.

Although disappearance of tobacco during the 1944-45 season was at a record level, it was exceeded by 1945 production. Exports of tobacco last season totaled about 440 million pounds, compared with a prewar (1934-38) average of 464 million. Domestic consumption of most tobacco products is continuing near the wartime level. Tax-paid cigarettes during October totaled over 31 billion, the largest in history. Indications are that domestic consumption continued at a peak level in November and December.



# REGIONAL PRODUCTION ROUNDUP

**F**ARMERS in the various regions of the country are preparing another year of top production in 1946, though they probably will make some shifts from the wartime pattern of their farm enterprises. Heading the list is the partial resumption of long-term soil-building practices and easing up on intensive cropping of some of the land. This means more frequent crop rotations and larger acreages of sod crops, accompanied with a high level of livestock production. Further farm mechanization in all regions, especially in the South, will receive great impetus next year. And along with the technological advance will be greater effort toward more efficient operations. Production adjustments that lie ahead in each of the nine agricultural regions are summarized in the following field reports.

## Northeast

**F**UTURE market problems of Northeast<sup>1</sup> farmers under reasonably prosperous conditions are likely to arise more from competition with the products of other areas than from a lack of demand in the region. The markets for Northeast farm products, even during the war, have been mostly in the region because of the concentration of urban population and industry there. This is in sharp contrast to the situation in many other sections of the country.

### Dairying

Northeast milk production for 1945 at record levels, about 10 percent above prewar, raises the question about the continuation of the large per capita consumption of fluid milk and whether interregional competition may increase in Northeast markets in the immediate years ahead. Next year may bring some developments to indicate the direction of change in production and utilization of milk throughout the country.

If price relationships become less favorable for milk production, some

adjustments will be desirable and inevitable. On most Northeast farms the best future adjustment probably would be in the direction of greater use of home-grown forage, perhaps less use of purchased grain, and maintenance or increase in herd size.

Forage improvement to get better feed during both the pasture and the barn-feeding seasons is one of the most promising means of improving milk production efficiency. Quick milking and better barn arrangement to reduce the daily bottleneck of dairy chores and increase the number of cows per man, as well as improved haying methods to reduce seasonal labor bottlenecks, are two other important ways to increase milk production efficiency. Now that fertilizer, labor, and equipment will be more readily available, 1946 should be a year to make further progress in these directions. It seems clear that only by becoming more efficient can the progressive Northeast dairy farmer maintain his competitive position and perhaps his farm income.

### Poultry

With 1945 egg production 30 percent above prewar for the Northeast, the possibility exists of the development in 1946 of a seasonal surplus of eggs such as was feared in 1945. Thus some

<sup>1</sup> New England, New York, Pennsylvania, New Jersey, Delaware, Maryland.

reduction in poultry numbers below 1945 is in prospect for 1946.

Eggs are produced in the Northeast on widely different types of farms. Probably two-thirds or more of the layers are in flocks of less than 700 birds on dairy, general, or part-time farms. The remainder are in larger flocks, mostly on specialized poultry farms and highly dependent on purchased feed. Most of the latter type are already operating at a high level of efficiency, with few alternative enterprises. If unfavorable conditions develop in 1946 or later years, they can do little but continue operations as efficiently as possible and hope for better times. Farms with the smaller flocks offer more opportunity for adjustment but at the same time production on these farms tends to be less sensitive to price changes since most of the labor may be supplied by the family and much of the feed may be home-grown.

The broiler industry of the Northeast is concentrated on specialized farms, particularly in the Del-Mar-Va area. Practically all feed is purchased, cash expenses are high, and any change in price relationships is felt very quickly. The industry is firmly established in the region but in 1946 and later years the need for efficient production may be greater than ever.

### Potatoes

In recent years roughly two-thirds of the Northeast potato crop has been grown on specialized farms in areas particularly adapted to producing potatoes, such as northern Maine. The balance has been grown in smaller acreages on more general farms, particularly in Pennsylvania and upstate New York. In the specialized areas, there seem to be few if any close alternatives to potatoes and the adjustment problems center around methods of producing potatoes most efficiently. In the other areas more opportunity exists for shifting empha-

sis to such enterprises as dairying and vegetables. The Northeast ranks high in potato output per acre and per man, but has not exhausted by any means the opportunities to improve production efficiency and to maintain soil resources.

The Northeast intermediate crop acreage in total did not increase much during the war but it shifted to New Jersey and Long Island where yields are high. In the future it would seem that the size of the crop in present intermediate areas will depend considerably on its ability to compete with, and become a part of, the late crop. Among other things, more adequate storage facilities and a longer marketing season may be needed.

### Truck Crops

Northeast truck crop acreage, particularly for processing, expanded greatly during the war, with the 1945 acreage for processing roughly 40 percent above prewar. A considerable part of the canning crops is grown on dairy farms with fairly good alternative use for any land released from vegetables. Nevertheless contraction, even on dairy farms, cannot be expected to take place as quickly or as easily as expansion.

Many truck crop growers plant several different vegetables and in making plans for the future can take advantage of the opportunities that exist of shifting emphasis toward those with the most favorable outlook. A method of insurance open to some growers, and one which may expand, is to plant crops having alternative use either for fresh market or for processing. Nevertheless, anticipated expansion of quick freezing methods and improved transportation, particularly by air, which may bring increased competition from other regions in eastern markets, is an important problem facing Northeast truck crop growers.

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# Appalachian

**T**HE end of the war may not greatly change the total demand for agricultural products of the Appalachian Region<sup>1</sup> in 1946 but it does create farmer concern about proper timing of future adjustments.

Desirable peacetime use of agricultural resources should be given major emphasis. Production intentions for the use of land in 1946 should include changes to greater soil conservation and restoration measures, or to shifts that will lead more quickly to such adjustments, while keeping production near peak levels. With farm incomes favorable and with greater supplies of machinery, labor, limestone and fertilizer available, conditions continue bright for cropping practices leading to increased yields.

## Row Crops

With a normal planting season this spring, some increase over the small 1945 acreage appears desirable in the acreage planted to row crops, although acreage should not be as large as in 1944. Much of this increase, mainly in cotton and corn, would be obtained by using cropland that was idle in 1945. Some increase in cotton acreage over the small 1945 acreage appears likely because of prospective better cotton prices and the possible availability of more labor. A larger corn acreage will be needed to feed the larger numbers of livestock.

Prospective strong demand for tobacco warrants an increase over 1945 in the acreage of fire-cured and flue-cured types, about the same for dark air-cured, and a small decrease in burley.

As demand for processing vegetables may be somewhat less than during the war, a decrease in acreage of these crops appears desirable. Some decrease in acreage of soybeans for beans may be justified also.

Peanuts are important in some parts of the region, as a considerable portion of the peanuts for the edible trade are produced in the Virginia-Carolina area. At prospective prices, peanut production in this area represents the most profitable use of resources. Although peanut acreage here did not increase as rapidly during the war as in some other areas, slightly less acreage for nuts should be planted in 1946.

## Small Grains and Hay

Larger acreages of the close-growing crops, should be the general pattern, with relatively more barley. Due to smaller acreage of row crops in 1945 which resulted in considerable idle land, 1946 will be a good year to increase the acreage of small grains. The shift to small grains is an excellent conservation measure and favors higher feed production. A reduction of wheat acreage in favor of barley and oats is a desirable long-time adjustment.

Total acreages of tame hay and seed crops probably will be about the same as in 1945. However, some expansion in production of lespedeza and alfalfa is desirable. Much of the desired increase in lespedeza hay and seed could be obtained as a second crop following small grains and other hays. Shifting more hay acreage to alfalfa would step up total hay production more rapidly, because of higher alfalfa yields.

## Livestock

Acreage adjustments to increase feed crop production and pastures will require more livestock to utilize the feeds. Recommended livestock changes are based largely on this fact. With a favorable season, total livestock production in 1946 would equal or exceed that in 1945, a favorable year. The main shift would be some recovery in hog production from the sharp out-back started in 1944.

Because of the improved feed grain situation, some increase from 1945 in the number of sows to farrow appears desirable. In general, however, rough-

<sup>1</sup> Kentucky, Tennessee, North Carolina, Virginia, West Virginia.

age-consuming animals are favored as farmers shift to more hay and pasture crops. How far the expansion can go and remain stable depends directly on sustained feed production, which, in turn, is dependent upon the adoption of improved production practices.

Livestock numbers in 1946 probably should be around 1945 levels. Workstock perhaps will decline at a slightly faster rate than before, making room for additional productive livestock. A small decrease in the number of all cattle may occur as farmers shift more to a cow-calf program instead of carrying calves through the winter as feeders. A moderate increase in sheep and lamb numbers is desirable in the blue-grass areas. Hens and pullets should hold slightly below 1945 numbers.

These adjustments in animal numbers, coupled with good management practices, would provide greater supplies of pork than in 1945, about the same number of chickens and turkeys raised, and the same output of milk, wool and eggs. Somewhat fewer commercial broilers would be produced.

### Feed Supplies •

If acreages and yields suggested for 1946 are realized, the resulting feed and pasture supply under normal weather should maintain the proposed livestock adjustments in 1946-47 close to the level apparent for 1945-46. Continued favorable conditions in 1945 for corn yields, together with other feed grains, have eased the year-end carry-over position of feeds appreciably. High tame-hay yields in most States, also, have brought a substantial improvement in the feed situation. These feed prospects may bring about an expansion in livestock numbers in 1946 beyond desirable levels. The unusually good pastures of 1945 will help relieve the pressure on harvested feeds, and permit animals to go into the winter season in good condition.

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## Southeast

IN view of the prospective easing of shortages in labor, transportation, and machinery, and the generally favorable outlook for agricultural prices, the over-all 1946 production level in the Southeast<sup>1</sup> is expected to be somewhat higher than in 1945. In the main, adjustments needed in the year ahead represent a continuation of those that took place during the war.

Acreage of idle cropland in 1945 increased 17 percent from 1944. In 1944 idle cropland increased 38 percent or 1,390,000 acres from 1943. The region's estimated 5,924,000 acres of idle cropland in 1945 accounted for almost one-fifth of its total cropland. Anticipated labor shortages and unfavorable planting weather for cotton accounted for the large idle acreage. Some of this land may be put into production in 1946 as industrial workers and men from the armed forces return to farms. The recent increase in idle cropland brought a decrease in acreage of intertilled crops. Total acreage of close growing crops has increased substantially.

### Cotton

Unfavorable planting weather, reduction in labor supply, and the inability of cotton to compete with peanuts in commercial peanut areas are factors responsible for the reduced cotton acreage in 1945. For the region as a whole, a reasonable cotton acreage for 1946 would be between that of 1944 and 1945. Increases over 1945 seem justified for areas such as the Mississippi Delta, the high yielding upland sections of Alabama and Mississippi, and some parts of the Piedmont and Coastal Plain. Decreases, or certainly acreages no larger than in 1945, seem in order for areas where alternatives such as peanuts are available.

<sup>1</sup> Alabama, Florida, Georgia, Mississippi, South Carolina.

Cotton in most parts of the Southeast probably will continue to return a larger net income per acre than alternative crops in 1946, except in commercial peanut areas. Cotton producers depending heavily on hired labor for harvesting may experience difficulties again in 1946. For that reason, those who anticipate a limited labor supply may need to reduce cotton acreage still further and substitute crops requiring less labor.

### **Peanuts**

Although demand for edible peanuts may fall off from wartime levels, peanut acreage in the Southeast in 1946 probably should be about the same as in 1945. Returns from peanuts in commercial producing areas are likely to continue well above those from alternative large acreage crops. As prisoner-of-war labor will not be available at harvest, farmers should be cautious in planning their acreage of peanuts to be dug. In all likelihood, full replacements for this labor will not be available by fall.

The 1945 peanut acreage available for hogs was about the same as in 1937-41. By planning a good sized pig crop in the year ahead farmers can assure good use of peanuts grown for digging, even if adequate labor is not available at harvest time. Although peanut production is expected to be profitable again in 1946, the acreage on any farm probably should not exceed one-third the suitable cropland. On many farms in intensive peanut sections the suitable land has been in peanuts as often as once every two years during the war, and there is need for greater soil conservation.

### **Vegetables and Tobacco**

The 1946 acreage of fresh vegetables can well remain very close to 1945 levels, although some adjustments seem desirable. Snap beans and cabbage acreages, for example, probably should be reduced slightly while acreages of other vegetables, such as green peas and lima beans, might be increased.

Sweetpotato yields for 1945 appear well above average, although acreage and production are lower. Some increase in acreage seems in order for 1946, in view of favorable price prospects. An acreage of Irish potatoes slightly above the relatively low level of 1945 may be desirable.

Tobacco in 1946 probably will continue to return more per acre than alternative crops in the areas where produced and slight acreage increase over 1945 seems desirable.

### **Feed Grains and Hay**

Despite a sharp decline in corn acreage in 1945, the region's corn production was larger than in 1944. An increase of 181,000 acres in small grains from 1944 contributed a total grain supply for the region considerably above that for 1944. Hay production was larger than in 1944, but the quality is below average.

Emphasis upon expansion of small grain acreages, particularly oats, is indicated again in 1946, with an increase of at least 10 percent over 1945. Along with this should go increases in hay crops, especially lespedeza. Corn acreage could well remain at 1945 levels.

Production of small grains for grazing will be emphasized, as they provide excellent grazing and furnish a winter cover crop. The Agricultural Conservation Program offers assistance for establishing a satisfactory cover of small grain seeded in the fall of 1945. Specifications provide that the crop may not be cut for hay or harvested for grain.

### **Livestock**

The Southeast has long consumed more livestock and livestock products than it produces. With feed grain and roughage supplies relatively favorable for the 1945-46 livestock year and with prospects for good prices, increased production over 1945 would be justified for most classes of livestock and livestock products.

The upward trend in cattle numbers evidenced during the last few years is

expected to continue. Most of the regional increase in cattle numbers has been due to increases on woodland ranges of Florida, South Georgia, Alabama, and Mississippi. Although dairy cow numbers have increased recently to some extent, on January 1, 1945, they were about the same as ten years before. Milk production may be expected to continue well below needs. As demand for low-grade beef may drop off when better beef becomes available, heavy marketings of low-grade beef cattle in the Southeast may be justified in early 1946.

Because of reduction in demand, Southeastern commercial broiler production probably will decline in 1946. Egg production for 1946 could well be somewhat above that in 1945, if production were distributed more evenly through the year.

An increase of 10 to 15 percent in the number of sows farrowing in 1946 would be consistent with anticipated costs, prices, and feed supplies.

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*Bureau of Agricultural Economics*

## Lake States

**P**ROSPECTIVE ample feed supplies and more favorable labor, machinery, and fertilizer situations make the 1946 production picture bright in the Lake States,<sup>1</sup> especially with normal weather and favorable prices. Large hay and small grain crops in 1945 help offset a rather unsatisfactory growing season for corn. The general use of silos by dairy farmers will help them to cope with the soft corn situation.

But Wisconsin and Michigan dairy farmers may find it somewhat difficult next summer to obtain sufficient corn for dairy rations to maintain high production levels. And in some parts of the region, particularly Minnesota, hog and beef cattle producers will need to

<sup>1</sup>Minnesota, Wisconsin, Michigan.

exercise considerable ingenuity to secure the most from their soft corn crop because its feeding value has been considerably reduced by the immaturity of corn at the time of frost.

### Dairy Products

Lake States milk production will probably be maintained at a high level in 1946 unless prices become unfavorable during the year. Milk cow numbers have risen in the region for the eleventh consecutive year and it is unlikely that any sharp liquidation will take place unless demand falls off and present prices are not maintained. Good pasture conditions, a large hay crop, and a bumper small grain crop are all favorable to maintaining the size of dairy herds.

The wide use of silos has done much to reduce the hazard of frost damage to the corn crop. About 63 percent of all farms in Wisconsin have silos, and in the heart of the dairy area the numbers rise to about 75 percent, with more than 100 silos per 100 farms in some counties.

The problems of demand for manufactured dairy products constitute the central problem influencing the continued prosperity of dairy farmers. These problems are of course largely beyond their direct control. If the Nation can continue a program of full employment at high wages, and if food processors and consumers can be induced to use the new war-developed products of the dairy industry in sufficient quantities, the continued prosperity of Lake States dairy farmers will be more nearly assured.

### Hogs and Beef Cattle

Following an unfavorable growing season, early frosts this fall probably damaged the corn crop more in Minnesota than in Wisconsin or Michigan. With more dependence on corn as grain for feeding hogs and beef cattle, on the diversified farms of Minnesota, the situation is somewhat worse than on dairy farms. Corn harvest will probably be delayed as long as possible to permit corn to dry on the

alk. But many farmers may find themselves without sufficient dry corn to carry the anticipated 1946 spring pig crop to market weight, and some revision downward is anticipated. The 1945 fall pig crop may be fed to unusually heavy weights to use soft corn before it would spoil in the spring. Beef cattle utilize soft corn to better advantage than other classes of livestock, hence there may be a larger than normal number of cattle put on feed in Minnesota this fall. This will be true especially if feeder cattle are plentiful and prices are not too high.

Because the feeding value of the 1945 corn crop may be reduced as much as 30 percent in Minnesota, and if the loss cannot be made up from the large production of small grains, production of livestock will need to be curtailed. There is not enough old corn left on farms to make up the loss in feeding value of immature corn. Farmers in Wisconsin are in a more favorable position because so large a proportion of the corn is ensiled.

### Poultry and Eggs

Important among the factors making it desirable to reduce poultry production in 1946 is the fact that most of the egg breaking and drying plants providing dried eggs for shipment abroad are located in the Midwest. With curtailed demand for dried eggs it seems likely that egg producers in the neighborhood of such plants will find it difficult to find satisfactory alternative markets for their product. Lower egg prices may bring the egg-feed price ratio down to a point where it will not be particularly profitable either to produce large quantities of eggs or raise large flocks of pullets or broilers.

However, should the demand for poultry products from the Lake States farms be as great in 1946 as in 1945, the capacity to produce sufficient quantities to satisfy it is now there. Hatcheries were booked to capacity until well into the summer of 1946.

The dairy enterprise is undergoing a

number of important changes because of improvements in the field of technology. Many new innovations are still in the experimental stage, but greatest interest is centered in the problems of putting up hay and silage. Gutter cleaners are being tried out in an effort to eliminate the heavy work of removing manure from the dairy barn, and manure loaders are coming into more frequent use on many farms. Pen barns are being tried as a substitute for the conventional stanchion type. These and many other improved practices are being experimented with in effort to cut the time, cost, and physical labor involved in the production of the Nation's milk supply.

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## Corn Belt

THE transition to a peacetime economy creates new uncertainties for the Corn Belt<sup>1</sup>—the Nation's principal surplus food-producing region—but a strong demand for its agricultural products can be expected to continue well into 1946.

The total acreage of cropland probably will remain virtually constant, but the acreage of the intertilled crops in 1946 is likely to fall below wartime levels. With the return of peace and a somewhat less urgent need for all-out agricultural production, Corn Belt farmers want to reconvert in the direction of soil-conservation systems of farming which would utilize available resources to better advantage over a long period of time.

Most of the reduction would be in the acreage of soybeans, as little, if any, change in the acreage of corn appears to be desirable in 1946. The 1946 acreage of other intertilled crops—potatoes and truck crops—probably will not differ much from the 1945 acreages. Only limited expan-

<sup>1</sup>Iowa, Illinois, Indiana, Ohio, Missouri.

sion of these latter crops took place in the Corn Belt during the war. Compensating increases in the acreages of the small grain crops in 1946 would provide additional opportunity for increasing the seeding of grasses and legumes to give larger acreages of sod crops in succeeding years.

### **Soybeans and Corn**

If at planting time next spring the prospective prices for the 1946 corn crop are near current ceilings and the support price for the 1946 crop of soybeans is reduced from the 1945 level by the amount of the current subsidy to processors, Corn Belt farmers are likely to reduce the 1946 acreage of soybeans 10 to 15 percent below 1945. On the other hand, if prospective prices are nearer the guarantee levels of 90 percent of parity—about \$1.00 per bushel for corn and \$1.50 per bushel for soybeans—a 30 to 40 percent reduction in the 1946 crop of soybeans appears likely, particularly in the heavy producing areas.

Feed supplies in the Corn Belt will continue to be large in the current feeding year, though below the record wartime levels. Early frosts caused widespread damage to immature corn, particularly in the western Corn Belt. Some difficulty may be encountered in utilizing the soft corn before serious deterioration takes place next spring.

Increased production of oats throughout the Corn Belt in 1945 will partially offset any decline in the volume or quality of corn harvested. Greater quantities of farm-grown wheat are also available in the eastern Corn Belt as a result of the high yields obtained this year. Ample supplies of hay are available in all sections of the Corn Belt. The supplies of byproduct feeds in the United States will probably be as large as last year's record levels.

### **Meat Animals**

Livestock numbers and production are likely to be smaller in 1946 than in 1945. The heavy feeding rates of recent years may be reduced during the 1945-46 feed year. Thus total

supplies of feeds available per animal unit may be about the same as a year ago.

While the 1945 pig crop will probably be about the same as in 1944, it may be moderately greater in 1946. But in the western Corn Belt where the 1945 corn crop is short and relatively poor in quality little change is expected in 1946. Considerable expansion in hog production is likely in the eastern Corn Belt, however, where corn supplies will be greater than during the 1944-45 feed year. Some decline in hog prices is looked for in the heavy marketing seasons next year, which may hold production lower than feed supplies warrant.

The number of beef cattle and calves on Corn Belt farms is still near record levels. A high slaughter rate in 1946, in anticipation of lower beef prices, will result in some decline in cattle numbers during the year. However, the output of beef will be large because of the high rate of slaughter and because more cattle probably will be put on feed. Feeder cattle offer the best outlet for the large supplies of soft corn, particularly in the western Corn Belt. Other feeds also appear to be ample for fattening a large number of cattle.

The downward trend of the past several years in sheep and lamb numbers will continue in 1946 but probably at a reduced rate. Other livestock enterprises remain more attractive than sheep to Corn Belt farmers.

### **Dairy Products**

The output of milk during 1945 has been at record levels in the Corn Belt. Production in 1946 will probably fall below that of 1945. Some decline in cow numbers is in prospect for 1946. Production per cow will probably also be lower with somewhat lighter feeding of concentrates. High protein feeds may not be available in so large a volume as in 1945.

A strong demand for milk and most processed milk products will continue



long as pay rolls are at high levels. Smaller quantities of dried or evaporated milk products will find a ready market, but greater quantities of butter will be taken at even higher prices. These shifts in demand for dairy products will probably mean a lower composite price for milk to farmers who deliver to plants that have been processing whole milk instead of cream. With the scheduled removal of feed production payments and other subsidies on dairy products during 1946, returns to the dairy farmer will be affected adversely unless corresponding increases in ceiling prices are permitted. Labor costs are likely to continue to rise.

### Poultry and Eggs

Since the close of the war, the poultry and egg situation has deteriorated rapidly in the Corn Belt. The immediate future does not appear very encouraging. Throughout the country, a greatly increased civilian supply of red meats is reducing the demand for eggs and to a lesser extent for chickens, with prices received by farmers for eggs near support levels. Declines are expected to be especially pronounced in the Corn Belt where reduced processing activities will affect returns to producers of lower grade eggs.

The number of layers has fallen below the peak of 1944 but heavy feeding has held production of eggs per bird at record levels. Liquidation of laying flocks will probably continue during 1946 as prices for eggs decline. Fewer chickens may be raised for meat purposes even though only a moderate decline in the price for chicken is expected.

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## South Central

**A**GRICULTURAL problems in the South Central States<sup>1</sup> during

<sup>1</sup>Arkansas, Louisiana, Oklahoma, Texas.

the next few years revolve around production policies relating to cotton, wheat, rice, and peanuts—crops on which large numbers of farms in the region depended heavily both before and during the war. After producing for the insatiable demands of a world at war, the farmers in the region are asking: "Why can't farms be operated profitably at full capacity in producing food and fiber for a world at peace?" Although the answer depends in large measure on many matters outside of agriculture, the decisions farmers individually make in preparing their plans for 1946 and the next few years will be of much importance in determining how well they prosper during the "long pull" ahead.

While prices for some commodities in 1946 may tend to be nearer support levels than ceilings, the prospective changes in price relationships will not be enough to call for any major shifts in the level or pattern of farm production in the region.

Stimulated by large withdrawals of farm people from the agricultural labor force—for the most part to better paying nonfarm jobs—the region saw considerable advance in technological improvements on farms during the war. As these improvements are extended in the years ahead, it is likely that fewer rather than more people will find profitable employment in agriculture in the region.

Next year may see considerable rebuilding of depleted equipment inventories and acquisition of new types of labor saving machinery. Many farmers, particularly cotton farmers, expect to change from horse and mule-drawn equipment to tractor power and equipment. But, if these outlays are not obtained with a view toward the long-range problems of competitive peacetime markets, many farmers may find themselves with capital commitments that do not reduce operating costs compared with hired and family labor and thus do not

increase earnings enough to justify the outlay.

### **Cotton**

The prospective price for cotton will tend to maintain the prominence of the crop in each of the major cotton producing areas next year in the South Central States. Compared with the 1945 cotton acreage, which was held down by bad planting weather, substantial increases are in prospect in several areas, particularly in western Texas and Oklahoma and in the Delta. In these areas, if prospects at planting time suggest even a modest improvement in the labor supply, farmers may be expected to increase their cotton acreages.

In other cotton producing parts of the region, notably the Coastal Plains, various enterprises have partially replaced cotton in the operating programs of many farms. Some of these enterprises, particularly livestock, feed crops, pastures, and specialty crops, will offer considerable resistance to the return of cotton to its prewar importance. However, there is much idle land in these areas and if labor becomes more plentiful and less expensive, cotton probably will be expanded at the prices in prospect for 1946.

### **Wheat and Rice**

In the main wheat areas of Oklahoma and Texas unusually favorable moisture conditions for establishing a winter wheat crop, and additional land available for planting wheat this fall because of below normal acreages of row crops last summer suggest that wheat for harvest in 1946 is likely to occupy a larger acreage in this region than in any year of record.

The prewar and war expansion of rice acreages has been justified on the grounds that depleted fertility and ground water supplies could be restored in later years when the demand for rice was less urgent. With rice stocks depleted and without a significant threat of competition from a recovery of Asiatic production in 1946

it appears that even though the Southern crop is maintained at a high level in 1946 the production should find a ready market at good prices. However, growers who have encountered increased costs as a result of declining yields and increased water pumping charges would probably gain by beginning to shift toward a more conservative rice cropping program.

### **Oil Crops and Sugar Cane**

The acreage of peanuts, after an uncommonly rapid expansion in 1943, has been decreased to a level thought to be fairly well in line with limits set by available labor, established market facilities, and good soil management. In this region the bulk of the peanut acreage is now on farms where returns from the crop compare very favorably with alternative enterprises. In some areas, such as the Cross Timbers area in Texas, returns from peanuts are larger by a considerable margin than those from alternative crops, and here moderate increases in the acreage of peanuts are in prospect for 1946.

Production of soybeans for harvest as beans has been restricted almost entirely to the Delta and similar alluvial areas in the eastern part of the region. During the war soybeans, having relatively light labor requirements, replaced some of the cotton acreage on many farms. However, soybeans proved to be quite vulnerable to damage from weather and insects, with the result that returns have often been discouragingly low. A considerable part of the crop has been used for hay or turned under each year. With conditions favoring an increase in cotton acreage in 1946, some reduction in the acreage of soybeans planted for harvest as beans will likely result. But this substitution will not adversely affect oil seed supplies as many growers obtain higher oil yields per acre from cottonseed than from soybeans.

Conditions surrounding sugarcane production have been improving. Use of mechanical harvesting devices has

been spreading rapidly, and with the freeing of materials for the manufacture of this equipment, many growers are reported to be looking forward to complete mechanization of the crop. The program for purchasing frozen cane, along with possibilities for further reducing production costs, should encourage an expansion in the cane acreage for harvest in 1946. Without new installations, however, crushing capacity limits expansion of sugarcane acreage to only moderate increases over 1945.

### **Livestock**

Inventories of brood sows have not recovered from the heavy liquidation of hogs in 1944, especially in the main grain producing areas of the region, where cash grain prices have not favored increased feeding. Hence the prospective supply of feeder pigs is not expected to permit any important increase in pork production before late in 1946.

Compared with 1945, a small increase in the number of chickens raised, including broilers, is in prospect for 1946. Egg production in 1946 for most areas should be maintained at or slightly below the 1945 level, which was 8 percent below the 1944 record.

Probable reductions in the unusual war demand for fluid milk in the region will cause a partial shift of dairying in 1946 to a lower cost basis and to prices based on manufacturing uses which may temporarily arrest the current upward production trend. However, dairying has an increasingly important part to play in the organization of farms throughout most of the region in the years ahead.

Current range cattle and sheep numbers probably are not excessive in terms of average pasture conditions, but inventories of breeding stock approach speculative levels in relation to the liquidation that would be necessary should a general drought develop. Heavy culling of herds under advantageous circumstances will extend into 1946. Moderate downward adjust-

ments in range cattle numbers probably will be partly offset by increases in the number of cattle in the eastern part of the region. Also, in southwest Texas, deterioration of heavily stocked ranges and severe bitterweed infestation is likely to lead to a sharp reduction of sheep inventories, with some offsetting increase in cattle.

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## **Great Plains**

**F**IVE years of abundant rainfall and high prices for farm products find most farmers and ranchers in the Great Plains<sup>1</sup> in relatively good financial condition. The agricultural plant is geared to abundant production, with the volume of production and output per man the highest in history despite labor and machinery shortages. In 1946 labor may be more plentiful and the supply of machinery should be increased considerably. The demand for food seems to justify a high level of production in 1946, though some minor adjustments between production enterprises will be required in order to achieve a better balanced production pattern.

### **Wheat and Oil Crops**

A moderate reduction in wheat acreage planted for harvest in 1946 seems desirable in view of the relatively large acreage in 1945 and an anticipated lower peacetime demand. The wheat goal for 1946 in the Plains is nearly two percent less than the acreage planted for harvest in 1945, but high prices may encourage farmers to plant a larger acreage than the goal suggests.

Over half of the country's wheat acreage is in the Plains States and wheat is a major source of income on a large proportion of the farms there. Though the wheat acreage in the Plains is not now excessively high

<sup>1</sup> Kansas, Nebraska, North and South Dakota, Montana, Wyoming, Colorado.

compared with historical trends, future conditions may require a decrease in the relative importance of wheat in the Plains economy. Associated with this may be changes in type of production, continued increase in size of farms, and decreases in number of farms and people. In anticipating the adjustment problems ahead it is encouraging to note the current increase in size of farms and the rapid forward strides in farm mechanization. These developments will help to pave the way for adjustments required in the future.

A material reduction in acreage of flax in the Plains States seems likely, as world trade in oil crops is resumed and the national demand for domestic oil crops sinks to peacetime levels. This adjustment will not be difficult since the acreage in this crop per farm is in most instances rather small.

A moderate reduction in acreage of soybeans in 1946 is anticipated but the acreage may be reasonably well sustained in peacetime if production of soybeans continues to be relatively advantageous in eastern Kansas, where three-fourths of the soybean acreage in the region is located.

### **Feed Grains and Hay**

Associated with the reduction in acreage of cash crops is an anticipated increase in feed grains in 1946. This increase is in line with national demand and with a desirable shift toward a more diversified economy in future years. While increases in all feed grains seem desirable in 1946 the greatest changes should probably be made in corn, sorghums, barley, and oats.

In spite of a slight 1946 increase over 1945 the acreage of corn in the Plains would still be substantially below the 1929-38 average, particularly in Kansas, Nebraska, and Colorado. Most of the increase in acreage of sorghums in 1946 compared with 1945 should probably be in Kansas and South Dakota. The increase

in acreage of barley and oats, though general throughout the region, should be most pronounced in the Dakotas.

An increased hay acreage in 1946 is a logical step in the recovery to normal, predrought levels, representing a response to the demand for more soil-building crops and larger supplies of hay. If the 1946 acreage were increased 10 percent above 1945, it would still be below the average acreage for the period 1929-38 and appreciably lower than the desirable acreage for peacetime. The necessity for increased acreage of hay is greatest in North Dakota, South Dakota, and Nebraska.

### **Cattle and Sheep**

A moderate decrease for 1946 from the high point on January 1, 1945, in cattle numbers in the Plains seems reasonable because present large numbers probably exceed normal carrying capacity of pastures and peacetime demand for meat can not be expected to equal the demand in wartime.

The number of sheep may be reduced moderately in 1946 in continuation of recent trends in Montana, Wyoming, and Colorado, where three-fourths of the sheep in the Plains are normally found. In North Dakota, South Dakota, Nebraska, and Kansas, however, a moderate reduction would still leave sheep numbers above the average for the period 1922-41.

Although sheep numbers have been decreasing during the war, numbers of both cattle and sheep have shown a general upward trend since 1922. This upward trend is partially explained by decreasing numbers of horses, improved grazing facilities, and better management in the use of feed.

### **Hogs and Poultry**

An increase of as much as 25 percent in the number of sows to farrow in 1946 compared with 1945 would still leave the total below desirable peacetime levels and below the predrought normal. Such an increase, though quite sharp, would be in

harmony with long-term future adjustments and also with historical trends. In South Dakota, Nebraska, and Kansas, where the major share of the hogs in this region are produced, hog numbers declined drastically during the drought period of the 1930's. Recovery toward normal numbers reached a high point in 1943. There were considerably fewer hogs in 1944, but numbers increased again in 1945.

Poultry production continues at high levels, with the number of hens and pullets on farms considerably above prewar. It remains to be seen whether present high levels of poultry production in the Plains can be maintained in the face of a possible declining demand.

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## Southwest

**P**EACETIME conditions are expected to modify rather than change the direction of the war-accelerated expansion, intensification, and mechanization of agriculture in the Western States.<sup>1</sup> But some war-induced trends in the production of particular products are likely to be reversed. Adjustments to all sorts of influences, as always, will differ greatly with locality and among farms, but total agricultural output in the West is likely to continue to increase during the next few years.

In the years immediately ahead, reductions are expected in the acreages of some vegetables, flaxseed, rice, and vegetable seed; fewer beef cattle and horse numbers, but a leveling-off of the decline in sheep numbers. Increases appear likely in sugar beet acreages to prewar levels, appreciable increases in alfalfa and rotation pasture, some increase in feed grains and cotton, continued increase in acreages of fruits and vines, in dairy cow num-

bers, and feeding out of larger numbers of cattle and sheep.

### Farm Labor

This past fall one-fourth of all foreign workers and prisoners of war engaged in agricultural work in the United States were in the Southwestern Region. Few, if any, prisoners of war are expected to be available during 1946 and the future of the Mexican national labor supply after May 1946 is uncertain.

During recent months the agricultural labor force has been supplemented by workers returning from war industries and the armed forces. But both veterans and war industry workers are inquiring about living conditions as well as wages and accepting only the better opportunities. On the other hand, employers are becoming more critical of job applicants and are selecting year-round workers with more care than during the war. The most difficult farm placement job at the present time is that of matching the job to the worker.

The hired year-round labor force increased during 1945 and probably will show further increase in 1946. Uncertainty about labor supplies may act as a deterrent to the planting of some labor-intensive crops, particularly vegetables.

### Field Crops

The sugar beet acreage in California and Utah drastically reduced during the war largely because of severe competition from truck crops and other crops, probably will increase in 1946. The increase of \$1 a ton in the national price guarantee for next year puts sugar beets in a more attractive position relative to competing crops than a year ago. Other favorable factors are larger quantities of fertilizer as well as the progress made during the past year in mechanization, particularly in harvesting machinery. Acreage in the region for 1946 is expected to be greater than in 1945 but below the capacity for processing.

Cotton acreage in the West probably

<sup>1</sup> Arizona, California, New Mexico, Nevada, Utah.

will increase again in 1946. Only in the Salt River Valley of Arizona has the position of cotton been markedly weakened, by increased competition from vegetables and alfalfa. Unless given increased price support the small remaining acreage of American-Egyptian cotton there is likely to be reduced still further in 1946. The mechanical cotton picker, now in its third season on a few farms, may tend to increase the cotton acreage. But less than twenty machines are now in operation in California and not enough machines are expected to be available to have much influence on 1946 acreage.

After a 1943 peak of 333,000 acres, the California flaxseed acreage declined to around 133,000 acres in 1945, about  $2\frac{1}{2}$  times the prewar average. Weed infestations and a favorable price for barley, the chief competitor of flax, have been the principal reasons for the decline since 1943. Barley prices probably will continue strong through the coming flaxseed planting season, tending to hold down the flaxseed acreage.

### Vegetables

Wartime demands and favorable support prices caused an increase of 40 percent in acreage of truck crops for processing. Most of the increase occurred in tomatoes, accounting for about two-thirds of the total wartime acreage of vegetables for processing. Although the demand by the armed forces for tomatoes will be sharply reduced below wartime levels, the 1946 tomato acreage in California is expected to be substantially above the 1937-41 acreage.

Induced by war demands, price supports and a favorable competitive position, the 1945 early potato acreage in California more than doubled the prewar average. Most of the early potato production is highly mechanized, much of it is handled by large operators, and there appears to be little likelihood of a decreased acreage in 1946. It is not possible to determine just what the competitive

position of California earlies will be in postwar markets but it is doubtful that the 1945 acreage can be profitably maintained over a period of years.

### Livestock

During the war dairy cow numbers and milk production in California and Utah continued the prewar upward trend, while numbers remained about the same in Arizona, New Mexico, and Nevada. Even so the demand for dairy products was unsatisfied during the war, and the demand for fluid milk by an increased population with larger incomes caused marked shifts in utilization of milk. Demands for dairy products in this region are expected to provide an outlet for the greater milk production in 1946 which anticipated increases in supplies of alfalfa, pasture, and feed concentrates will permit.

On January 1, 1945, beef cattle numbers in this region had decreased from the record peak of over 2 million head a year earlier to about prewar levels. Heavy marketings during 1945 and drought in parts of Arizona and New Mexico may bring numbers on January 1, 1946 to less than prewar. Further reduction may be required to bring numbers in line with safe carrying capacity of ranges.

Range sheep numbers decreased greatly during the war. The sharpest decline occurred during 1944 followed by a further decrease in 1945. Scarcity of skilled herders, increased costs, and greater profits from cattle were important causes for this decline. Reductions may continue during 1946, but there are some indications that the end of the downward trend is near.

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## Pacific Northwest

FARMERS in the Pacific Northwest,<sup>1</sup> while aware of the shifts made during the war, are not contem-

<sup>1</sup> Washington, Oregon, Idaho.

plating drastic changes in farm organization for 1946. The greater availability of labor, machinery, fertilizers, and other supplies, than during the war, will enable farmers to return to proper rotation systems and generally to restore and improve their farms. The shift from labor-intensive to labor-extensive crops, noticeable in 1945, is likely to continue in 1946.

Expected changes in major types of land use in the region as a whole lie in the direction of increased acreages of sod crops, summer fallow, and fruits; a maintenance or slight decrease of the comparatively large acreage of grain crops; and a decrease in the acreage of intertilled crops. The total cropland acreage will continue its gradual upward trend because of the breaking up of land in low rainfall areas, clearing of some out-over land, and minor irrigation developments.

### **Food and Feed Grains**

Unsatisfactory wheat yields in portions of the low rainfall area of the Columbia Basin in 1945 are expected to result in decreased plantings of wheat and a larger acreage in summer fallow or idle land. No serious difficulty is anticipated in the disposal of a large Northwest wheat crop during the coming season.

The 1946 barley acreage is likely to be slightly smaller than last year while increases are expected in oats and rye. Feed grain production in the Pacific Northwest has been expanded considerably during the past several years and is not likely to decline to its prewar level because of increased livestock production and better feeding practices, and high costs of feed grains shipped in from other regions.

### **Dry Peas and Beans**

After the 1944 peak, the acreage of dry edible peas was reduced considerably in 1945 because of lower support prices and a determined effort to

avoid the accumulation of large supplies early in the current year. Although supplies were reduced to manageable proportions, a further reduction is desirable from the standpoint of proper land use and future stability of production. In later years field pea production will exceed prewar levels, as it fits well into the rotation system practiced in the Palouse wheat area. This expanded production will offer serious marketing problems unless further feed outlets can be found for portions of the crop.

Some recovery from the low 1945 acreage of dry edible beans in Idaho is expected in 1946, with normal weather. However, the experience of the past few years, less favorable prices than for competing crops, and the return to more balanced rotation systems will all discourage a large increase in 1946 and future years.

### **Potatoes and Sugar Beets**

Suitable land for potatoes is limited and present indications are that any reduction in the 1946 potato acreage will be small. The assurance of favorable prices under the support program coupled with low seasonal labor requirements makes this crop more attractive to growers in 1946 than sugar beets or other competing crops. But in future years lower prices and a return to balanced rotation systems will result in some reduction, primarily in the poorer areas.

High seasonal labor requirements for sugar beets and the relatively greater profitableness of competing crops will continue to keep an expansion in this crop within rather narrow limits. Small increases are possible in Idaho but the uncertain outlook for seasonal labor supplies and strong competition from potatoes and beans will be retarding factors. In Eastern Idaho, where the greatest unused plant capacity exists, the competition with potatoes is the keenest. More favorable price relationship in comparison with competing crops and the additional development and greater

use of beet machinery would result in an increase in sugar beet production in future years.

The Pacific Northwest in 1946 will continue to hold its position as an important producing area for hay and cover crop seeds. Although certain adjustments should be made between various kinds and types of seeds because of accumulated supplies and the availability of imported seeds, future demand in general resulting from greater emphasis upon soil conservation and soil building practices justifies intentions of growers to continue present production levels.

### **Milk Cows and Hogs**

Despite an expected large demand for dairy products, Northwest dairy-men are likely to reduce cow numbers in 1946, largely because of their labor difficulties and other problems this year. Judicious culling and better feeding methods, however, may prevent a decline in total milk production.

Hog production in the Northwest during the past two years has been below prewar levels and in 1946 is not expected to regain its former position. The hog-feed ratio is not sufficiently favorable to obtain major increases, even though feed supplies are ample. In future years the level of hog production in the Northwest will depend to a large extent upon price relationships and the possibility of using surplus soft wheat for feed.

### **Range Cattle and Sheep**

Beef cattle numbers in the Northwest have been at peak levels during the past few years and only minor reductions have been made in 1945. A further downward trend is expected in 1946 but no major liquidation will occur. In most areas feed supplies are ample to maintain present numbers and no large scale deterioration of the range because of overstocking is apparent. However, some reduc-

tion is desirable to put stockmen in a stronger position to withstand seasons of below normal weather. Cattle feeding has declined during recent war years and it is doubtful that an increase will occur in 1946.

Sheep numbers in the Northwest have been declining for the past several years, and there is no indication as yet that this downward trend has been halted. Labor difficulties, feed prices, and concern over the wool surplus have prevented sheepmen from maintaining their flocks. Maintenance of numbers will be difficult in 1946 as the necessary number of ewe lambs for replacement will not be available. A reversal of the downward trend is desirable from the viewpoint of better range utilization. Some increases in sheep numbers can be expected to come gradually after an improvement takes place in labor conditions.

### **Chickens and Turkeys**

An unusually high percentage of the chickens produced during the past season have been raised for meat rather than for laying. Therefore, a further decline in 1946 is expected in egg production over 1945. Greater availability of red meats and reduced profitability of poultry meat production, however, will tend to reverse this trend for the chickens raised during the coming year.

Turkey production in the Northwest, particularly in Oregon and Washington, has witnessed a considerable expansion, reaching a peak in 1945. While some reduction is expected in 1946 and future years, this enterprise is likely to continue on a higher level than was attained during prewar years. Favorable prospects for the development of wider markets will encourage production at a comparatively high level.

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100			Index of prices received by farmers (August 1909-July 1914= 100)				
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	58	50	100	100	100	100	101	101	101	
1915-19 average.....	72	90	168	151	150	148	154	163	158	
1920-24 average.....	75	122	180	161	173	178	159	163	123	
1925-29 average.....	98	129	143	155	168	179	160	155	148	
1930-34 average.....	74	78	107	122	135	115	105	94	85	
1935-39 average.....	100	100	118	125	128	118	119	109	119	
1940-44 average.....	192	234	139	150	148	212	162	146	171	
1941.....	162	169	127	131	132	154	139	121	146	
1942.....	199	241	144	162	150	201	162	151	188	
1943.....	230	322	151	167	162	284	193	190	209	
1944.....	235	329	152	176	170	315	198	174	200	
1944-November.....	232	321	152	177	171	-----	203	207	200	
December.....	232	326	153	178	171	-----	203	211	198	
1945-January.....	234	326	153	179	172	324	202	199	203	
February.....	236	324	154	179	172	-----	200	183	209	
March.....	235	322	154	180	173	-----	198	175	211	
April.....	230	314	154	180	173	335	184	176	215	
May.....	226	302	155	180	173	-----	192	179	217	
June.....	220	301	155	180	173	340	181	189	216	
July.....	211	286	155	180	173	362	192	197	215	
August.....	187	261	154	180	173	-----	195	207	212	
September.....	171	225	154	181	174	-----	197	201	207	
October.....	164	-----	155	182	175	855	199	204	202	
November.....	-----	-----	-----	182	175	-----	202	218	203	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio
	Crops							All crops and live-stock	
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops		
1910-14 average.....	100	101	102	98	98	99	-----	99	100
1915-19 average.....	193	164	187	168	187	125	-----	168	162
1920-24 average.....	147	126	192	189	140	148	143	160	151
1925-29 average.....	140	110	172	145	129	141	140	143	149
1930-34 average.....	70	76	119	74	72	94	106	86	90
1935-39 average.....	94	95	176	83	106	83	102	97	107
1940-44 average.....	123	119	245	131	159	133	172	143	154
1941.....	97	89	159	107	130	85	129	106	124
1942.....	120	111	252	149	172	114	163	142	159
1943.....	148	147	325	160	190	179	245	183	192
1944.....	165	166	354	164	209	215	212	194	195
1944-November.....	165	157	358	168	215	195	188	189	196
December.....	167	160	364	168	215	206	228	196	200
1945-January.....	169	163	365	163	214	205	262	200	201
February.....	169	164	360	161	215	211	223	197	199
March.....	171	166	359	163	215	211	203	196	198
April.....	172	163	362	163	215	221	259	204	203
May.....	172	161	363	165	216	227	193	198	200
June.....	173	162	364	169	217	237	269	210	206
July.....	169	161	364	171	221	237	244	207	206
August.....	167	158	367	172	215	214	240	202	204
September.....	167	157	365	176	213	217	159	191	197
October.....	175	160	373	180	210	219	181	196	199
November.....	178	161	375	182	213	217	285	203	205

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income adjusted for seasonal variation, revised September 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

**JANUARY 1946**

*A Brief Summary of Economic Conditions*

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AS the year 1946 gets under way, farmers are taking stock of their resources and sizing up the outlook for the future, to shape their operations to the needs of peace. As is shown by the production goals suggested by the Department of Agriculture for the crop year ahead, continued large production will be needed in 1946, although significant adjustments are indicated in some cases. These goals, it will be noted, are more selective than were those of wartime. They are goals for starting the transition from war to peace. Unlimited wartime demands are no longer in the picture. Instead, the need now is to maintain a level of production that will provide enough of the right kinds of agricultural commodities to supply our own people and those of the war-torn countries that are depending on us for help, and at the same time to make as many of the necessary changes to peacetime operation, farm by farm and area by area, as is feasible.

\* \* \*. The fall pig crop of 1945 was the third largest in at least 20 years. About 35 million pigs were saved in the period June-December, or 12 percent more than in that period of the year before and 21 percent more than the 1933-42 average.

## 1946 Agricultural Goals

**T**HE fifth year of agricultural goals for all major crops, livestock, and livestock products provide farmers with guide-posts in making their plans for 1946. The 1946 goals, more selective than during the war when too large production was almost impossible, point to a desirable production level for commodities and are designed to provide the right things in the right amounts so as to avoid shortages or surpluses. The suggested shifts among crops are designed to meet changing needs during this period of conversion from a full wartime to a full peacetime economy.

The 1946 goals call for a total acreage of over 356 million acres, not as large as the 1945 goals but above the acreage actually planted or grown in 1945. Livestock goals are nearly the same as 1945 numbers except in the case of poultry and dairy, which are not as large because of the decrease in military and lend-lease requirements.

The goals may be larger than some producers may have expected in view of the end of the war. However, the need for food in the war devastated areas is great. Also, the recommended goals are at a level which would provide a higher civilian per capita consumption than during the war. The production goals recognize these needs even though all the problems of getting food to the people needing it, such as financing and transportation, are not fully worked out. Allowance is also made for a margin of safety in case of adverse weather, as well as to build up or maintain reserve stocks.

The farm plant is geared to turn out a total volume of production about one-third greater than before the war. This was recognized in the 1946 goals. Recognition is also given to the need for restoring a better balance between soil-depleting and soil conserving crops. In the interest of maintaining soil fertility, some re-

duction in intertilled crops is called for. However the need for one more year of high production of certain commodities such as wheat, rice, flaxseed, and flue-cured tobacco means that complete reconversion to a peacetime pattern of soil management is not possible in 1946.

**Sugar.**—The largest percentage increase in goal acreages is for sugar beets—32 percent over the 1945 planted acreage—placed at what is believed to be the maximum productive capacity. This acreage of sugar beets, with average yields, should produce approximately 1.9 million tons of raw sugar. This, together with slightly over one-half million tons of raw sugar from domestic sugarcane, would contribute about 31 percent of domestic sugar requirements. Increased price support payments for these crops in 1946 was announced by the Department on August 1.

**Food grains.**—The goals for wheat, rye, and rice are maintained at a high level in view of relief needs. The wheat goal is placed at the 1945 acreage in the belief that we need one more big wheat crop. The rye acreage goal to be harvested for grain is 30 percent above the acreage actually harvested in 1945. The rice goal, somewhat below the 1945 acreage, is well above the 1937-41 average.

**Feed grains.**—Goals for feed grains—corn, oats, barley, and grain sorghums—are all at or slightly above 1945 acreages. Because food crops had first claim on the cropland during the war, production of enough feed for all the livestock and livestock products which could have been used was not possible. Carry-over stocks of feed grains at the end of the current feeding year will be below prewar levels. The feed grain goals provide for rebuilding these stocks by 1.9 million tons. A rate of feeding of livestock is calculated to continue at about 1,500 pounds of concentrates

per production unit. This is approximately the same as for 1945 and 9 percent above the prewar rate of feeding.

Besides adding to feed supplies, oats and barley constitute most desirable nurse crops for legumes and grasses, of which increased seedings are desired in future years.

Price supports will be in effect for corn since it is a basic commodity. Nonrecourse loans will also be available to farmers on oats, barley, and grain sorghums, based on the loan rate for corn and the relative feeding values of these grains to corn.

**Hay.**—The recommended goal for tame hay provides a slightly greater acreage per unit of roughage-consuming livestock than during the war years.

**Hay and winter cover crop seeds.**—Legume and grass seeds are essential materials in a program for increased acreages of hay and rotation pasture for feeding livestock and to build up soil resources. In shifting from wartime to peacetime production, larger quantities of legume hay seeds and winter cover crop seeds will be needed. The goals reflect this need.

**Oil crops.**—Because flaxseed imports are uncertain, an acreage of flaxseed as large as that planted in 1945 is requested. Supplies from such an acreage, together with expected imports, should provide for increased use of drying oils.

While immediate requirements for soybeans for oil are high, the goals call for a 13-percent downward adjustment in view of prospects of additional supplies from world sources by 1947 when most of the 1946 domestic crop will be crushed, and in recognition of the need to shift toward a better balance between intertilled crops, small grains, legumes, and grasses.

The goal for peanuts includes requirements for edible purposes only. This goal is 38 percent above the prewar 1937-41 average, although substantially below wartime levels.

Oil crops are Steagall commodities and they are required to be supported at not less than 90 percent of parity or the comparable price. Flaxseed producers have been assured an income of \$3.60 per bushel for flaxseed, Minneapolis basis.

**Vegetables.**—The goal for commercial truck crops for fresh market is 4 percent less than the 1945 acreage, but 6 percent above the 1937-41 average. The goal for vegetables for processing is 3 percent below the 1945 acreage, but is 34 percent above the 1937-41 average. Government requirements comprised about one-third of the pack in 1944 and in 1945 so that supplies for civilians were reduced. This goal is designed to replenish stocks.

The goal for Irish potatoes is 5 percent below the 1945 planted acreage and the 1937-41 average. The pronounced shift toward concentration of potato production in high-yielding areas permits production of needed amounts on a smaller total acreage. The sweetpotato acreage goal is 5 percent above the 1945 acreage and 1 percent above the 1937-41 average.

The dry edible bean goal is approximately the same as the 1937-41 average. The dry edible pea goal is reduced below the high levels during the war when large supplies were needed to supplement the supply of dry edible beans. The pea goal acreage, with normal yields, would furnish a production approximately double the needs for civilian consumption in this country, but relief needs are expected to absorb the increased output.

**Fiber crops.**—In establishing the cotton goal, an attempt was made to meet estimated requirements by qualities. Shifts which will tend to increase production of the higher grades and medium and longer staples are recommended.

The broomcorn goal is at the prewar 1937-41 average.

**Tobacco.**—The recommended acreages represent the directions and approximate degree of change needed for

the different types of tobacco, with 10 to 25 percent increases over the 1945 acreages asked for flue-cured, fire-cured, Maryland and cigar leaf, but a 10-percent decrease for Burley. Because the supply of Burley is adequate, a 1946 production considerably in excess of requirements might result in

excessive supplies, materially lower prices, and the need for rather drastic adjustments in marketing quotas after 1946.

**Dairy.**—The 120½-billion-pound milk goal, the same as the goal for 1945, is less than the all-time record of over 123 billion pounds in 1945 when

1946 Agricultural Goals, With Comparisons

Commodity	1937-41 average	1945 actual December summary	1946 goal* (National)	1946 goal as percent of —	
				1937-41	1945
Planted acres unless indicated otherwise					
<b>Food grains:</b>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Percent</i>	<i>Percent</i>
Wheat.....	69,311	67,781	68,876	99	102
Rye <sup>1</sup> .....	3,700	1,981	2,572	70	130
Rice.....	1,118	1,517	1,406	126	93
<b>Feed grains:</b>					
Corn.....	91,975	92,887	97,000	105	104
Oats.....	39,646	45,224	46,000	116	102
Barley.....	14,290	11,429	13,000	91	114
Sorghums, except sirup.....	17,070	15,666	16,600	97	106
<b>Oil and fiber crops:</b>					
Soybeans for beans <sup>1</sup> .....	4,121	10,873	9,500	231	87
Peanuts grown alone.....	2,361	3,958	3,250	138	82
Flaxseed.....	2,307	4,066	4,200	182	103
Cotton.....	26,357	18,157	20,000	76	110
Broomcorn.....	327	284	323	100	115
<b>Sugar:</b>					
Sugar beets.....	914	775	1,025	112	132
Sugarcane <sup>1</sup> .....	291	301	327	112	109
<b>Vegetables:</b>					
Truck crops for fresh market.....	1,731	1,901	1,827	106	96
Truck crops for processing.....	1,488	2,072	2,004	135	97
Potatoes.....	2,913	2,896	2,780	95	96
Sweetpotatoes.....	741	715	750	101	105
Dry beans.....	1,977	1,790	2,000	101	114
Dry peas.....	280	528	488	174	92
<b>Tobacco:</b>					
Flue-cured.....	925.4	1,078.3	1,161.9	126	108
Fire-cured.....	112.7	63.1	75.2	67	119
Burley.....	895.8	531.6	476.6	121	90
Dark air-cured.....	44.4	46.1	43.8	99	95
Other.....	130.3	126.8	148.7	109	117
<b>Total cultivated crops.....</b>	<b>284,529</b>	<b>287,007</b>	<b>295,838</b>	<b>104</b>	<b>103</b>
<b>Hay and seed crops:</b>					
Tame hay.....	57,197	59,905	60,000	105	100
Hay seeds <sup>2</sup> .....	(3,451)	(4,840)	(5,030)	163	116
Cover crop seeds <sup>3</sup> .....	182	355	406	223	114
<b>Total acres.....</b>	<b>341,908</b>	<b>347,907</b>	<b>356,244</b>	<b>104</b>	<b>102</b>
<b>Livestock numbers:</b>					
All cattle and calves, Dec. 31.....	67,407	480,200	78,000	117	98
Beef cattle, Dec. 31.....	31,602	40,600	39,200	124	97
Milk cows, average for year.....	23,575	425,700	25,507	108	96
Sheep and lambs, Dec. 31.....	62,101	444,800	44,800	86	100
Sows to farrow in spring.....	7,529	8,187	8,360	111	102
Spring pigs saved.....	48,771	51,570	52,000	111	101
Hens and pullets on farms, Jan. 1.....	376,577	4,099,161	408,083	108	87
Chickens raised on farms.....	656,464	4,821,353	680,000	104	83
Turkeys raised.....	30,723	44,150	39,700	120	90
<b>Total grain-consuming animal units, Dec. 31<sup>4</sup>.....</b>	<b>128,500</b>	<b>147,000</b>	<b>143,000</b>	<b>111</b>	<b>97</b>
<b>Livestock products:</b>					
Milk production (pounds).....	107,903,000	123,250,000	120,500,000	112	98
Egg production (dozen).....	3,252,000	4,577,000	3,910,000	120	85

<sup>1</sup> Harvested acres.

<sup>2</sup> Acreage part of tame hay acreage though listed separately; seeds include alfalfa; red, alsike, sweet and ladino clover; lespedeza.

<sup>3</sup> Seeds include hairy vetch, common and Willamette vetch, Austrian winter peas, crimson clover, common ryegrass.

<sup>4</sup> Preliminary.

<sup>5</sup> Indicated, not goal.

<sup>6</sup> Rough approximations (includes horses and mules).

\*Suggested, except wheat, rye, dry peas, and cover crop seeds, which are final.

favorable pasture conditions and high rates of feeding resulted in record production per cow. Need for some shifts in the utilization of milk and the kinds of products is recognized in these goals.

**Poultry and eggs.**—With more red meat available than last year, there will be a smaller outlet for chicken and turkey meat as well as for eggs. The goal for eggs produced in 1946 is 15 percent below 1945 output but 20 percent above the 1937-41 average. The goal for number of chickens raised is 17 percent below the number raised in 1945.

Egg prices, as well as prices for chickens and turkeys, will be supported at levels which will reflect a United States average farm price of 90 percent of parity.

**Meat animals.**—The goal for spring pigs of 52 million head is about equal to the 1945 crop and the average of the last 10 years. The present support price of \$13 for hogs is in effect until October 1, 1946. For the period from October 1, 1946, to September 30, 1947, the price of "good" and "choice" butcher hogs will be supported at an average of \$12, with seasonal differences in the level.

The goal for beef cattle in 1946 is for a total slaughter of about 35 million cattle and calves, and if attained would yield about 11.6 billion pounds of beef and veal. Such a slaughter would be

about the same as the all-time record in 1945. A slaughter of this number would reduce total cattle numbers to 78.6 million by the end of 1946, 3.6 million head below the record peak reached at the end of 1943 but 17 percent above the 1937-41 average.

The 1946 goal for sheep and lambs is for a total slaughter of about 20 million head compared with an expected slaughter of 24.3 million in 1945. Such a slaughter would leave sheep numbers at the end of 1946 about the same as the expected total at the beginning of the year, about 44.8 million head. The slaughter goal, therefore, is the maximum level of slaughter that can be permitted if the downward trend in sheep numbers now in progress is to be checked.

If farmers and ranchers meet the goal for pigs raised and the slaughter goals for cattle and calves and for sheep and lambs, total meat production in 1946 can be expected to equal the 22.6 billion pounds produced in 1945. This production would provide each civilian in this country about 150 pounds of meat for the year, with enough left over to take care of estimated requirements for military use and export.

PHILLIP F. AYLESWORTH  
*Production and Marketing  
Administration*

## Commodity Reviews

### PIG CROP

**M**ORE than 35 million pigs were saved in the fall of 1945 (June-December), 12 percent more than were saved during that period of 1944 and 14 percent more than the average for 1934-43. The fall pig crop of 1945 was the fourth largest in at least 22 years.

The combined spring and fall pig crop of 1945 totaled 87 million head, only slightly more than the 1944 total, but 10 percent above the 1934-43 average.

A slight increase in the 1946 spring

pig crop above 1945 is indicated. On December 1, farmers intended to breed around 8.5 million sows for spring farrow. If these intentions are realized, and the number of pigs saved per litter is equal to the average for 1934-43, the 1946 spring pig crop would total around 52 million head, 2 percent larger than in 1945 and 19 percent above the average for 1934-43. The greatest relative increase from 1945 in the number of sows to farrow in the spring is indicated in the Eastern Corn Belt, where crop production was reduced sharply in 1944 and the 1945 pig crops were

comparatively small. A larger crop is indicated in all other major regions of the United States except in the North Atlantic States, where a smaller crop is in prospect.

Delayed marketings of the 1945 spring pig crop and the large fall crop promises a moderately larger supply of hogs for slaughter during the first 9 months of this year than in that period last year. With a slight increase in the 1946 spring pig crop in prospect, slaughter during the fall and winter of 1946-47 may be slightly greater than during the current season.

## WINTER WHEAT

**A**CREAGE of winter wheat seeded in the fall of 1945 totals 51,940,000 acres, 3.6 percent more than seeded in 1944. In only 2 years, 1937 and 1938, has winter wheat seeded acreage been larger than 52 million acres. The 10-year (1934-42) average is 46,757,000 acres.

In the eastern half of the United States, the acreage seeded for the 1946 crop is smaller than that seeded in the fall a year earlier, but the total in the western half is larger than in the fall of 1944. In the eastern half, land preparation and seeding were hampered by the delay in harvesting 1945 crops, rains in late September, and wet fields at the usual seeding dates. In the Great Plains and other States of the western half, increase in seeding was encouraged by good weather for seeding, favorable prices, a successful 1945 season and an increase in land available for wheat. The greatest decrease in acreage was in the North Atlantic and East North Central States, especially in New York, Ohio, Indiana, and Michigan, where late harvesting and wet fields prevented planting of all the acreage intended. Sizable increases occurred in the Southern Great Plains States. Greatest increases were in Texas, New Mexico,

Colorado, Montana, California, and the Pacific Northwest.

The condition of winter wheat on December 1 was reported lower than that of a year earlier, but above average.

A 1946 winter wheat production of about 751 million bushels is indicated. This would be approximately 9 percent below that of the preceding year, but 28 percent above the 10-year average. The indicated acreage that will not be harvested for grain is 11.4 percent of the total planted acreage, compared with 6.9 percent a year earlier, 12.1 percent in 1944, and the average of 17.3 percent.

## TRUCK CROPS

**A**GGREGATE tonnage of 25 commercial truck crops produced in 1945 for the fresh market was 6 percent larger than the record set in 1944 and 30 percent above the 10-year (1934-43) average. Aggregate production of 11 commercial truck crops for processing in 1945 was 31 percent larger than average, but was 4 percent less than 1944 production.

Record commercial production (for processing) of cabbage, cauliflower, celery, eggplant, lettuce, peppers, and tomatoes and near-record crops of snap beans and carrots contributed to the heavy tonnage this year. In addition, lima beans, cantaloups, sweet corn, cucumbers, Honey Ball melons, Honey Dew melons, shallots, and watermelons also produced heavier tonnages than in 1944. Compared with average, only artichokes, beets, Honey Ball melons and green peas were lighter crops this year.

The weighted average price per ton received by farmers for all commercial fresh market production in 1945 was about midway between the peak prices of 1943 and the lower prices received for the 1944 crops. The aggregate value of all 25 fresh market crops produced in 1945 exceeded that of any previous year of record.

In 1945 the weighted average price per ton received by farmers for 11 commercial truck crops for processing reached a new record high, about 4 percent higher than the previous record in 1944. Because of the reduced quantity produced, however, the aggregate value for 1945 was slightly less than for 1944.

## RYE

**A**CREAGE of rye sown for all purposes in the fall of 1945, totaling 3,721,000 acres, is 17 percent less than sown in the fall of 1944 and 41 percent less than the average. Seeded acreage includes that intended for pasture and hay, soil improvement purposes, as well as rye to be harvested for grain. An allowance also is made for spring seeding in States that grow spring rye.

The acreage in all States is materially less than sown in 1944, except in Colorado and Oregon where it is the same as in 1944 and in North Dakota,

## Index Number of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1935-39 average...	107	128	
1940.....	100	125	
1941.....	124	132	94
1942.....	159	150	106
1943.....	192	162	119
1944.....	195	170	115
1944			
December.....	200	171	117
1945			
January.....	201	173	117
February.....	199	173	116
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116
June.....	208	173	119
July.....	206	173	119
August.....	204	173	118
September.....	197	174	113
October.....	199	175	114
November.....	205	175	117
December.....	207	176	118

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Dec. 15, 1944	Nov. 15, 1945	Dec. 15, 1945	Parity price Dec. 15, 1945
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.894	0.837	1.45	1.53	1.54	1.56
Rice (bushel).....do....	0.813	0.742	1.83	1.83	1.81	1.43
Corn (bushel).....do....	0.642	0.601	1.06	1.11	1.09	1.13
Oats (bushel).....do....	0.399	0.340	0.694	0.679	.703	.702
Hay (ton).....do....	11.87	8.87	16.80	14.90	15.40	20.90
Cotton (pound).....cents..	12.4	10.34	20.85	22.62	22.84	21.83
Soybeans (bushel).....dollars..	10.96	0.984	2.05	2.09	2.09	11.69
Peanuts (pound).....cents..	4.8	3.55	8.15	8.30	8.32	8.45
Potatoes (bushel).....dollars..	0.687	0.717	1.50	1.81	1.37	1.28
Apples (bushel).....do....	0.95	0.90	2.33	3.08	3.34	1.69
Oranges on tree, per box.....	11.81	1.11	2.23	2.05	2.71	2.06
Hogs (hundredweight).....do....	7.27	8.38	13.40	14.20	14.20	12.80
Beef cattle (hundredweight).....do....	6.42	6.56	10.10	11.40	11.50	9.54
Veal calves (hundredweight).....do....	6.75	7.80	12.80	13.40	13.50	11.90
Lambs (hundredweight).....do....	5.88	7.79	12.80	12.80	12.90	10.30
Butterfat (pound).....cents..	26.3	29.1	51.0	50.3	50.5	50.7
Milk, wholesale (100-pound).....dollars..	1.60	1.81	3.38	3.37	3.40	3.09
Chickens (pound).....cents..	11.4	14.9	24.1	23.9	23.8	20.1
Eggs (dozen).....do....	21.5	21.7	44.5	47.1	48.2	46.5
Wool (pound).....do....	18.3	23.8	140.8	41.2	40.8	32.2

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1910-July 1920.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county A.A.A. offices.

<sup>6</sup> Adjusted for seasonality.



Montana, New Mexico, Utah, and California, where increases occurred. In North Dakota acreage increased 52 percent, after three successive years of decreases.

The condition of rye on December 1 was 83 percent of normal, 5 points below that of a year earlier and 7 points above the 10-year average. The condition of the crop is relatively more favorable, compared with average, in the Western States and in North Dakota, than in South Dakota, Nebraska, and other important rye grain producing areas.

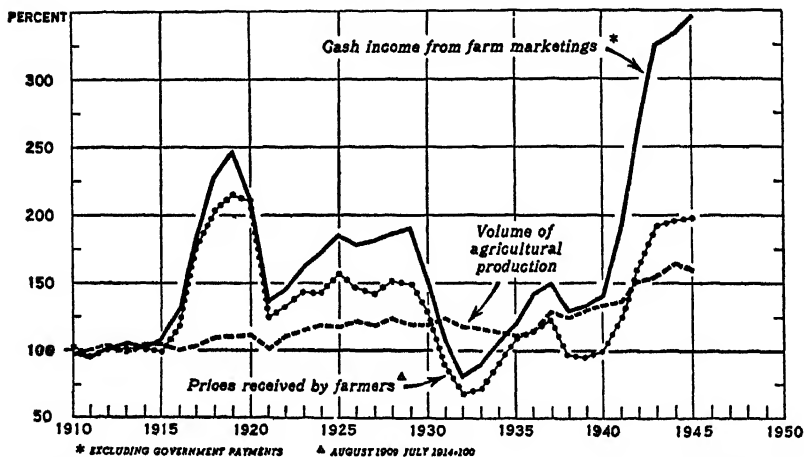
## FARM LABOR

AVERAGE number of workers on farms in 1945 was 9,843,000 persons, the smallest annual average on record. This total includes both family and hired workers. The average for 1944 was 10,037,000 workers.

On December 1, about 9,245,000 persons were engaged in farm work, compared with 9,337,000 on that date a year earlier. The number of hired workers employed on December 1 was 2,028,000, or 21 percent less than on November 1.

## AGRICULTURAL PRODUCTION, PRICES, AND INCOME, UNITED STATES, 1910-45

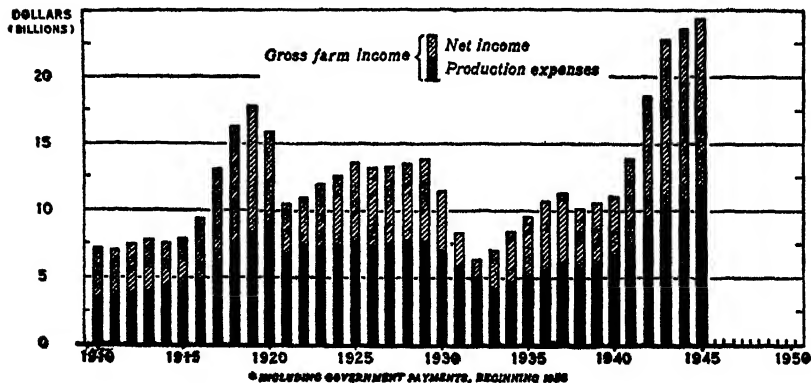
INDEX NUMBERS (1910-14=100)



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

## GROSS FARM INCOME: NET INCOME AND PRODUCTION EXPENSES OF FARM OPERATORS, UNITED STATES, 1910-45\*



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# Farmers and International Trade

WHAT happens in international trade and to the future peace of the world is important to farmers—and to everybody else. This is particularly true since the invention of the atomic bomb. What nations do about international as well as internal economic affairs will in part determine whether or not peace is maintained.

The American farmer has a particular interest in international economic affairs. From 1900 to 1915 the prosperity of farmers was accompanied by reasonably full international cooperation between countries. In contrast, the farm depression of the 20's and 30's was associated with a drying up of world trade. Recovery by purely internal measures, while international trade and cooperation with other countries languished, helped get the world into another war.

Today there are great possibilities for the farmer, especially if there is close cooperation and trade with other countries. There will be increased demands on non-European producers of foodstuffs. But this is secondary to the mutual interest of all countries in world-wide prosperity.

At the moment these ideas seem visionary because of all the confusion that seems to exist in international affairs. Behind that apparent confusion there is a pattern, a plan. And everyone must stick to it so that there will evolve the cooperative, more prosperous and more peaceful world common men everywhere want.

## Planks for Peace

Benchmarks have already been nailed down as steps toward these ideals. The first plank in that platform is the reciprocal trade agreements. United States tariff rates have already been reduced one-third below what they were in 1939, and other countries have made correspond-

ing reductions on rates charged America. Authority has already been given to the President which would allow him to bring them down another third. This country is reducing its tariffs in exchange for compensating reductions by other countries. This legislative action reflects the fact that the great mass of people have changed their attitude about tariffs.

## Second Plank

The second plank is a series of international conferences to work out means for an expanding world economy. The first two of these were the Hot Springs Conference on Food and Agriculture held in 1943 and the Bretton Woods Conference on Trade and Finance held in 1944. The Food and Agriculture Organization<sup>1</sup> was set up in Quebec in 1945 as a sequel to the Hot Springs Conference.

The Bretton Woods Agreements proposed two international organizations. The International Fund would stabilize exchange rates throughout the world. The International Investment Bank would provide for long-term capital investments at low interest rates. Both would be directed at restoration of war damage and for the rebuilding and development of industrial facilities. These are necessary for those countries that have too many farmers and too few jobs—the same problem the United States faces in the underdeveloped regions of the South.

These proposals have been ratified by Congress. Other countries have been waiting for completion of the Anglo-American negotiations on loans to England. At Bretton Woods it was decided that the agreements should be ratified before the beginning of 1946 by enough countries to set up the two proposed international finance organizations. These two proposals were signed at Washington late last Decem-

NOTE.—This is a summary of a speech the author gave at the Twenty-third Outlook Conference at Washington.—Editor.

<sup>1</sup> A discussion of FAO appeared in the *Agricultural Situation* for December 1944.—Editor.

ber and the Fund and Bank soon will open for business.

The creation of a Social and Economic Council of the United Nations Organization was designed to serve as a general economic staff to coordinate the actions of all the specialized organizations already mentioned, plus others that have been or will be created to deal with economic, social and cultural matters. It goes way beyond the League of Nations which only had the International Labor Office and a small general economic staff.

### Third Plank

The third plank is an international trade organization of some sort which has not yet been discussed much. The first public utterance on it was the Charleston, S. C., speech in November 1945 by the Secretary of State from which the following quotations are taken:

"... we have been discussing with Great Britain the principles of commercial relations—principles we want to see applied to all nations in the post-war world... based on the conviction that what matters is not the buttressing of particular competitive positions but the increase of productive employment, the increase of production and the increase of general prosperity... world trade cannot be throttled by burdensome restrictions.

"We shall shortly submit to the peoples of the world our views about these matters.

"We intend to propose: that commercial quotas and embargos be restricted to a few really necessary cases, and that discrimination in their application be avoided.

"... that tariffs be reduced and tariff preferences be eliminated.

"... that subsidies, in general, should be the subject of international discussions, and that subsidies on exports be confined to exceptional cases, under general rules.

"... that Governments conducting public enterprises in foreign trade... give fair treatment to the commerce of all friendly nations...

make their purchases and sales on purely economic grounds... avoid using monopoly of imports to give excessive protection to their own producers.

"... that international cartels and monopolies be prevented, by international action, from restricting the commerce of the world.

"... that the special problems of the great primary commodities should be studied internationally, and that consuming countries should have an equal voice with producing countries in whatever decisions may be made.

"... that the efforts of all countries to maintain full and regular employment should be guided by the rule that no country should solve its domestic problems by measures that would prevent the expansion of world trade, and that no country will be at liberty to export its unemployment to its neighbors.

"We intend to propose that an international trade organization be created under the Economic and Social Council, as an integral part of the structure of the United Nations... that the United Nations call an international conference on trade and employment to deal with these problems."

It is hoped that this conference will be convened in 1946 and, perhaps, in the first half of 1946.

### Fourth Plank

The fourth plank is the steps that need to be taken to maintain domestic full employment. The full employment proposal now before Congress illustrates one type of action for this purpose. It hasn't had final approval, but has been under active discussion.

### Fifth Plank

A fifth plank might be positive steps needed here in this country to increase trade. The following are some of the positive steps that might be taken:

1. Provide bigger and better facilities to obtain factual information about exports.

2. Put as much energy into increasing imports as into increasing exports. Imports get dollars into foreign hands that foreigners need to buy from United States. The more imported the more it is possible to export.

3. Provide the necessary governmental agencies and programs to encourage tourist travel here and to make it more pleasant for Americans to travel abroad.

4. Provide technical aid to industrialization comparable to the technical aid which FAO will give to agriculture. It is commonly thought that helping other countries industrialize will reduce our markets. This is not true. Canada makes more of the same products as the United States than any other country in the Americas. It is this country's greatest competitor and the most industrialized outside of the United States in this hemisphere. Yet this nation of 11 million people before the war took more of American exports than all of the 130 million people living south of the Rio Grande put together. The reason is that Canadians have a high income per capita, compared to the mere \$25-\$50 per capita earned in a year by most Latin Americans. This high income was achieved through industrialization.

5. Coordinate trade policies between countries. This will help to get rational adjustment between the trade policies of different countries.

#### **America's Future Role**

These five planks provide a forward-looking plan behind the apparent confusion of day-to-day operations. It does not answer all the questions by any means. It does not answer, for example, the questions of State versus private control of domestic industries in other countries. The same problem exists very strongly in the American economy, in the apparent conflict between central planning of annual production programs, with

price supports, parity prices, etc., in agriculture and unplanned free enterprise in industry.

Another conflict has to do with American effort to establish pretty free international trade. How is this to be coordinated with rather comprehensive government control of foreign trade and nationalization of many industries in many other countries? How will the operations of publicly owned or operated industries tie in with the operations of those run by private enterprise? The mixture of private and public control in and between countries and industries is a challenging one. However, the gap can be bridged by the measures outlined above.

A second danger can arise if United States fails to attain and maintain domestic full employment. For the next few years, heavy loans and exports may help maintain domestic full employment, but after a while maintenance of the same full employment will have to be based on both imports and exports.

Full employment here at home is one great step that United States can take toward world prosperity. This country dominates the world industrially. Its exports set the tone for the rest of the world. The more America buys, the more the rest of the world will buy from America.

Beyond maintaining domestic full employment is the responsibility for helping the other countries of the world recover and develop. This can be done easily from the vast financial and productive resources in this country. International trade will move a lot faster if we help other countries to get into production soon. This would be at a very small cost to United States and would involve only a small fraction of the energy exerted to win the war. It involves relief, loans, and funds for long-range development.

It is encouraging to note that the country seems united on foreign policy.

There is a general realization that (1) after the last war Americans turned their backs on the world and that (2) this must not happen again.

The proposals outlined here are a real plan, a pattern for peace which is more than mere vision. They are

something that the peoples of this country and other countries are determined to carry through and make work for the better, more prosperous and lasting peace everyone desires.

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## Research Ready for Farmers in 1946

**N**EW agricultural research, much of which can be applied by farmers in 1946, covers a wide range of subjects.

DDT, used so widely by the armed forces to control insect enemies of man, will get its first large-scale test by farmers this year. Experiments in many parts of the country for the last 2 years reveal that DDT will be useful in controlling Japanese beetles, Colorado potato beetles, potato leafhoppers, tomato fruitworms, pea weevils, and a number of other crop insects. Its use against flies and mosquitoes, as well as many other household pests, is already well known. DDT is not effective against Mexican bean beetles, several aphids, and common red spiders. It controls certain insect enemies of squash but is harmful to the plants.

### New Chemicals for Better Control

Last year's work also brought to light valuable new information on the application of insecticides. In the past, the use of liquid insecticides required the distribution of a considerable amount of water as a carrier for the active insecticidal material. New types of distributors break up the spray into a fine mist, giving good coverage on certain types of foliage with as little as 1 gallon of spray per acre. This new type of equipment makes practical the application of liquid insecticides from the air. Similar improvements have been made in the application of insecticides from the ground. These developments, together with the new aerosol method of

applying insecticides, give new impetus to insect control.

Besides DDT, another chemical with a long name, 2,4-dichlorophenoxyacetic acid—abbreviated to 2,4-D—will be ready for trial this year. Classed originally with the growth-regulating substances, this chemical was discovered to have unusual properties as a weed killer. Most of the experiments so far have dealt with weeds in lawns and pastures. But 2,4-D has the unusual property of killing such common weeds as broad-leaved plantain and dandelion without harming bluegrass and certain other lawn grasses. Experiments are continuing to determine to what extent 2,4-D will clear pastures of unpalatable weeds and leave the forage plants intact. Research also shows that this chemical is effective as a spray to prevent pre-harvest drop of apples and that it hastens the ripening of apples, pears, and bananas harvested green.

New knowledge of the value of nitrogen fertilizer for corn in sandy soils of the Southeast resulted from experiments in North Carolina last year. A common practice in that region has been to use about 200 pounds per acre of a complete fertilizer for corn, with yields averaging about 20 bushels an acre. Application of additional nitrogen gave surprising increases in yield. On one farm, yields increased from 19 to 107 bushels per acre where 120 pounds of supplemental nitrogen was used. The additional cost for fertilizer was but a small fraction of the value of the increased corn yield.

Tests to determine the effectiveness of penicillin against animal diseases have been encouraging. With the small quantities of penicillin made available for this purpose during the war, it was shown that the drug was fairly effective in controlling the principal organisms causing mastitis in cattle. Further investigations are under way, and it is possible that penicillin may be useful against other infective diseases of animals, though it will not, of course, ever eliminate the necessity for sanitary precautions.

### Improved Grain Varieties

New varieties of oats developed by the Department and several State experiment stations have in the last few years practically replaced old varieties in the North Central States. A still newer variety—Clinton—out-yielded them all in tests in Iowa in 1945. The new variety is resistant to the rusts and smuts and has a very stiff straw, which is an advantage in harvesting. In 1943 only 23 pounds of Clinton oats were harvested. Rapid multiplication by plant breeders increased this to 65 bushels—more than 2,000 pounds—by April 1944. In August of that year 1,200 bushels (20 tons) were harvested. This year seed will be available to farmers for wide planting in the North Central States.

Seed of a new early-maturing variety of hard red winter wheat, named Wichita, developed by the Department and the Kansas Experiment Station, has been distributed in parts of Kansas, Oklahoma, and Texas. It will aid farmers who like to put part of their acreage in an early variety to distribute labor more evenly and to get relief from rusts, drought, and hail, which are likely to injure later varieties.

Midland, a sorghum released in 1944, has short, stiff stalks that enable the crop to stand for some time after maturity with very little lodging. The stalks are nearly free from the so-called "weakneck" character that causes those of many dwarf grain

sorghums to break over after maturity, resulting in considerable loss. Midland can always be harvested with a combine and thus requires less labor.

### Better Feeding Formulas

Feeding dairy cows a larger proportion of their total grain ration during the first third of the lactation period increased milk yield by 10 percent in experiments at three stations of the Bureau of Dairy Industry. The control groups received grain at a uniform rate throughout the lactation period. The greatest difference in yields was during the first part of the period, when milk production is normally greatest. An increase in milk production with the same amount of feed would obviously be profitable to dairymen.

A dried meal made from vegetable wastes that accumulate in large quantities at processing plants has shown considerable promise as a poultry feed. Leaf meal made from broccoli compared favorably with alfalfa meal in a test by the Delaware Agricultural Experiment Station.

### New Poultry and Swine Breeds

Breeding poultry to improve the market quality of eggs has chalked up some successful developments that can be applied by progressive poultrymen. Lines of chickens have been bred to produce eggs with stronger, less porous shells that resist breakage and deterioration better than ordinary eggs. Eggs of other new lines have a larger percentage of thick white than usual and consequently are better for poaching and frying. Infertile eggs that retain their table quality for 2 weeks at 100° F., near hatching temperature, are another result of poultry breeding research. Another new line of chickens lay eggs almost entirely free from blood spots.

The Beltsville Small White turkey, developed a few years ago to meet the demand for smaller turkeys with plenty of white meat, is turning out to be a good layer. Ordinary turkeys usually

lay 40 to 60 eggs during the spring months and few if any eggs during the rest of the year. Two of the Small White hen turkeys laid, in 1 year, 211 and 206 eggs, respectively. These were the record producers, but the egg production of the variety in the Department's stock is quite high.

Breeding experiments with swine promise more efficient pork producers. In trials involving the use of selected inbred boars, the Department, in cooperation with 13 State agricultural

experiment stations, has produced litters that weighed 100 pounds more at 6 months old than litters sired by noninbred boars otherwise of the same breeding. The experiments are still in progress, but the results so far indicate that establishment of inbred lines of desirable stock within breeds and then crossing such lines may have practical value for hog producers.

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## Jute Situation in the United States

**M**OST United States farmers recognize that jute is the fiber from which burlap bags are made. Less widely known is the fact that jute has been grown in India from time immemorial and textiles made from it have been used by native people since ancient times. Today as then, practically all commercially produced jute is grown near Calcutta in British India.

Although no jute is produced commercially in the United States, farmers are directly concerned with the jute industry. Jute is a most important packaging material for things both bought and sold by farmers. Also, jute competes directly with cotton, a most important cash crop. The competition between jute and other materials, including cotton, is greatest in the field of bags. There jute competes directly with many types of bags made from cotton, mainly of shorter staples and lower grades, and with the larger paper bags, especially the multi-walled paper bags.

### Large Prewar Consumption

During the last 5 years before the outbreak of World War II the total amount of jute consumed in the United States was one-fourth as great as the volume of cotton consumed in this country. During this period the annual net imports of jute and jute manufactures into the United States were equivalent on a pound-for-pound

basis to more than 1½ million bales of cotton.

During the war the domestic demand for jute (raw and manufactured) greatly exceeded the prewar demand. However, imports were not only greatly below requirements but, because of wartime developments, were much smaller than in the immediate prewar years. Consequently, the domestic use of cotton fabrics and of other packaging materials during the war increased to an even greater extent than the total of all packaging materials. To meet the increased wartime requirements for bags and other packaging material and to offset the reduced imports of jute manufactures, concerted efforts were made to expand the production of osnaburgs and sheetings for cotton bags and increase the production of paper bags. An attempt was also made to obtain a fuller utilization of used bags and to encourage users to bring their own containers, thus limiting the need for certain types of bags.

During the 5-year period 1934-38 imports of jute and jute manufactures into the United States averaged 794 million pounds a year. Domestic exports of jute manufactures, mostly in the form of bags, averaged about 17 million pounds during the same period, leaving an annual average of approximately 777 million pounds of jute and imported jute manufactures available for domestic consumption.

These data do not include the jute bags which enter or leave this country each year as containers for other products.

### Most Imports Manufactured

Of the average gross imports of jute and jute manufactures, 161 million pounds or 20 percent were unmanufactured jute, consisting of 129 million pounds of jute and 32 million pounds of jute butts; and 633 million pounds or 80 percent were jute manufactures. Of the latter, 513 million pounds was burlap. Imports of jute manufactures other than burlap were 22 million pounds of new bagging, 49 million pounds of waste bagging and sugar sack cloth, 42 million pounds of bags, and 7 million pounds of other products including webbing, padding, interlining materials, carpets, carpeting, mats, matting, and rugs. The data include the outlying possessions of the United States—Alaska, Hawaii, Puerto Rico, and the Virgin Islands. Because most of the bags imported were for use outside the continental United States, actually it was a net exporter of bags during the 5 years 1934-38.

### Packaging Farm Products Chief Use

A large part of the imported manufactured jute consumed is for packaging materials. Most of this in turn goes into bags, mainly for packaging agricultural products. Ordinarily, four-fifths or more of the imported burlap

consumed in the United States goes into the manufacture of bags and about three-fourths of the bags in turn are used for packaging products bought or sold by farmers. These are exclusive of the imports of manufactured bags, noted above, which are equivalent in weight to about 8 percent of the annual burlap imports. About three-fourths of the imported bags are for packaging sugar in Hawaii and Puerto Rico.

Of the approximately 20 percent by weight of jute and jute manufactures imported in the 5 years 1934-38, which is represented by raw jute, 80 percent was long fiber and the remainder, jute butts. Normally jute fiber is imported into the United States principally for use by the rug and carpet, twine, furniture, meat packing, and rubber industries. The principal peacetime uses for imported long fiber jute include wrapping twine; yarns for backing linoleum, rugs, and carpets; centers in wire ropes and cables; yarn and roving for use in insulating and packaging electrical cables and fuses; and reinforced papers. Jute butts are used largely in the manufacture of coarse yarns for making bagging material used to cover raw cotton. During the war period the scarcity of regular cordage fibers and the large rope requirements resulted in Government diversion of long jute fiber from rugs and carpets to the production of

Jute: Trade Position of the United States, Average 1934-38

Item	United States including possessions	Possessions <sup>1</sup>	Continental United States
	<i>1,000 pounds</i>	<i>1,000 pounds</i>	<i>1,000 pounds</i>
Imports for consumption, total raw and manufactured	793, 911	30, 621	763, 290
Jute manufactures . . . . .	632, 627	30, 621	602, 006
Bags . . . . .	41, 691	30, 623	11, 068
Other manufactures . . . . .	591, 036	93	590, 943
Domestic exports . . . . .	16, 993	147	16, 846
Jute manufactures . . . . .	16, 908	147	16, 846
Bags . . . . .	14, 552	139	14, 413
Shipments from United States to possessions . . . . .		4, 392	-4, 392
Jute manufactures . . . . .		4, 392	-4, 392
Bags . . . . .		3, 826	-3, 826
Net trade position <sup>2</sup> . . . . .	776, 918	34, 806	742, 052
Jute manufactures . . . . .	615, 634	34, 886	580, 768
Bags . . . . .	27, 039	34, 216	-7, 176

<sup>1</sup> Alaska, Hawaii, Puerto Rico, and Virgin Islands.

<sup>2</sup> Imports minus exports plus shipments. This last factor will be a subtractor under "Continental United States," as it is a minus quantity.



substantial amounts of tent and other small size ropes. With the elimination of wartime controls, large quantities of raw jute will again be used in the rug and carpet industries.

In addition to agriculture's requirements for bags, large quantities of jute bagging material are required by agriculture for other types of packaging such as bagging for covering cotton bales. A domestic cotton crop equal to the average for the 5 years 1934-38 of nearly 12.4 million bales, if all covered with new common open-weave jute bagging, would require approximately 150 million pounds.

Actually, only about two-thirds of the cotton grown in the United States is covered with new open-weave material known as "jute bagging," most of the remaining cotton is covered with jute sugar-bag cloth. During the 5-year period 1934-38 it is estimated that the average annual imports of new jute bagging for cotton bales were enough for about one-fifth of the bales which were covered with this jute bagging. The remaining three-fourths of the cotton covered with the open-mesh jute bagging were covered with domestically produced bagging made of new and rewoven jute.

#### **Much Cotton Also Used for Packaging**

In addition to the jute used for packaging agricultural products, large quantities of cotton textiles are also used. On the basis of 1941 packaging

practices, it is estimated that the yardage of cotton goods required for bags was about 90 percent as large as the yardage of burlap so used. Cotton fabrics most commonly used for bags are sheeting, print cloths, and osnaburgs.

Large numbers of second-hand bags are in use at any given time. Exact information as to the proportion used bags are of the total bags in use is not available, but one trade survey made about the time of Pearl Harbor indicated that approximately 40 percent of the bags in use at a given time are normally second-hand.

During the war the total demand for packaging materials was so strong that all jute, cotton, and paper bags found a ready market irrespective of price differences. Although this may continue for a time, price will eventually again take on its traditional role in the determination of which alternative product will be purchased. The shipping situation and other conditions will be such that jute manufactures will likely be imported in quantities equal to or in excess of prewar levels. The prices of such imported goods may well exceed those prevailing immediately before World War II, but probably not to the extent that prices of domestic cotton packaging materials will.

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## **Credit Available for Farm Housing**

WITH farmers generally in a better financial position than for a long time, many are thinking of better homes for their families. Surveys in recent years reveal a great deal of interest in rural home improvement. One made a year ago among moderately well-to-do farmers reports that 1 in every 12 of these families intended at that time to build or buy a new house, when restrictions were lifted. And a larger proportion of rural families plan to remodel or repair old houses.

While some farmers will use their savings to build or buy new houses, or remodel or repair old ones, the large majority of those in good financial condition probably will use credit from individuals, banks, insurance companies, and the Farm Credit Administration. Of interest in this connection is the recent amendment to the Federal Farm Loan Act which

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NOTE.—This article is based largely on a speech the author gave at the twenty-third Outlook Conference at Washington.—Editor.

permits Federal land banks to lend up to 65 percent of the normal value of a farm, including improvements.

In addition to measures now authorized, proposals are being considered under which the Secretary of Agriculture would be authorized to make loans to owners of farms for the purpose of providing decent, safe, and sanitary dwellings, to be accomplished by construction, repair, alteration, or replacement. Eligible occupants of such dwellings would be owners, tenants, sharecroppers, or laborers. Seasonal workers would be given facilities through loans to owners or groups of owners. Rentals of seasonal properties would have to be approved and prevailing wages would have to be paid to the seasonal occupants.

Loans would be limited to owners of farms who cannot elsewhere receive the necessary credit on comparable terms. Apparently, almost every farmer lacking adequate housing might be construed as eligible because the interest rate would be 3 percent, a rate rarely available from other sources. Loans could not exceed 40 years and so far as the law is concerned they could be junior liens. The amortization schedules would provide some flexibility, as in good times prepayments would be required and in bad times reduced payments would be permitted.

Funds for this program under the current proposal would come from the RFC in such sums as might be appropriated from year to year.

A proposal has also been made to amend the United States Housing Act of 1937. It would authorize the Federal Public Housing Authority to make long-term loans and grants to local public agencies. These agencies would be expected to construct rental housing for families who have incomes so low that they would not benefit from the other program for loans to farm owners. Houses so built on farms by local public agencies would be rented

to operators or laborers, with an option to purchase. Rentals would be adjusted from year to year according to family need and income. The Federal Government would make up any difference between the cost of providing housing and the amount families can afford to pay. This would be done by annual contributions which may not exceed 50 million dollars per year.

To farmers in all degrees of financial condition one of the most important phases of the proposal under discussion is that of establishing technical services. The Secretary of Agriculture would be authorized to furnish technical services either for a fee or free of charge. It would be possible not only to furnish the farmer with building plans, specifications, and other advice and information but also architectural supervision and inspection of construction. Farmers who try to do their own remodeling or building would have competent direction. Farmers who hire their construction work would have adequate plans with which to start, would be able to obtain architectural supervision of the job at no more than a reasonable fee, and would be assured adequate inspection.

It might even be possible for lenders to utilize the services of the Government architects to serve as inspectors of property before closing a loan. Such services might be available on a reimbursable basis.

The Department of Agriculture and the National Housing Agency would be authorized jointly to carry on technical research. Facilities of State agencies and educational institutions might also be employed.

### Credit for Tenant Housing

Even though the average farmer may be in a strong financial position, hundreds of thousands of farmers have but meager resources. The present public policy is to encourage farm and

home ownership by the operators themselves, and the Bankhead-Jones Farm Tenant Act serves this public objective. As a byproduct the Farm Security Administration at the end of 7 years of operation under this law had financed about 15,000 new houses. About an equal number had been improved and repaired.

New proposals are to not only permit tenants to use the loan funds for buying farms, but would authorize the use of funds by present owners for enlarging farms to an efficient size and for improving existing structures. If liberalization of existing law should be accompanied by increased appropriations for loan funds, the construction and improvement of farm houses would be stimulated.

#### **Veterans' Benefits**

Veterans in general, like many farm tenants, lack adequate financial resources to buy a farm home. The Servicemen's Readjustment Act of 1944 (the "GI bill") includes provision for a Federal guarantee of loans. Loans for farming operations, including the farm house, are eligible for the Federal guarantee. The Federal guarantee to a lender covers 50 percent of a loan provided the guaranteed portion does not exceed \$2,000. For real estate loans, the guarantee has been increased recently to \$4,000.

By the first of November, according to the Veterans' Administration, some 600 loans aggregating nearly three-quarters of a million dollars had been approved for farm operations. Presumably some of this credit was used for housing.

#### **Construction Service of Cooperatives**

The development of improved marketing services may be the contribution of farmers' cooperative purchasing and supply associations. Some of these associations and their federated regional organizations have made a start in this direction. Many purchasing associations of farmers now sell certain

building supplies such as cement, plasterboard, and metal siding. The Farmers Union Grain Terminal Association of Minneapolis operates a chain of lumber yards. Several regional associations hold controlling interest in a shingle mill situated in British Columbia. The Fruit Growers Supply Co. has a heavy investment in saw-mills and timber in California. The Indiana Farm Bureau Federation owns three lumber mills in Arkansas, together with timber acreage. In Indiana, farm service shops operated by cooperatives are not only repairing farm and household equipment but are even building houses. The Ohio Farm Bureau Federation is moving in the same direction.

The cooperatives appear to be moving toward a fuller integration and rationalization of supply and construction services. Within the next decade or so there is the possibility that a Nation-wide farmers' cooperative construction service may be developed.

The rural electrification program has gone far toward bringing electricity to the farmer, but in other respects farm construction has not kept pace with modernizing of urban structures. The situation is emphasized by comparison of farm housing with urban housing as to sanitary facilities, equipment, state of repair, and overcrowding.

The improvement of farm housing cannot be achieved by any one approach. Loans to some at rates which cover all costs, loans to others at rates requiring some governmental assistance, outright grants to the needy, technical services and guidance available to all classes of farmers, cooperative construction services, research with State and Federal support—all these and more may be required before most farmers live in decent, safe, and sanitary dwellings. Comfortable and modernized dwellings also should be obtained by an increasing number of farmers.

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# Trends in Apple Production and Utilization

THE old saying: "as American as apple pie" has, perhaps, been heard around the world more often than any other gustatory remark. Yet, the main ingredient, the apple, is American only by adoption. Unlike tobacco and other famous native products, all of the apple varieties now grown, except those stemming from the native crab apple, originated from seeds and trees brought from other parts of the world, mainly Europe.

From these importations many years ago the apple has developed into one of the leading agricultural products of the country. During the past 5 years an average of over 115,000,000 bushels a year were produced in commercial areas, with an annual value of close to \$170,000,000. Before the war apples were an important agricultural export item, and, curiously enough, Europe was the chief customer.

Apples have enjoyed a long tradition in America as one of the favorite fruits. The earliest colonists planted apple seeds and trees and by the beginning of the nineteenth century virtually every farm in the northern two-thirds of the Nation had an apple orchard. When the country began expanding westward Johnny Appleseed and other frontiersmen planted apple seeds ahead of the settlers so that the end of the nineteenth century found apple trees growing from coast to coast.

Through this process many new varieties were developed with desirable characteristics. In the last few decades science has improved on these varieties. Now some trees have exceptional winter-hardiness, some apples have long-storing qualities, some are better for eating raw, some for cooking, and others for processing. Although several hundred varieties are important in local areas, the bulk of commercial production consists of less than two dozen varieties. And of these latter, the following seven make

up almost two-thirds of the commercial crop: Delicious, Winesap, McIntosh, Jonathan, Stayman, Rome Beauty, and York Imperial.

The trend of apple production was upward until about the turn of this century. From the early 1900's until the severe winter of 1917-18 which killed many trees in the East, the level of production remained fairly constant, about 175,000,000 bushels a year. But since then the trend has been moderately downward. This declining trend was halted, at least temporarily, during the past 4 years, largely because of better orchard care stimulated by higher prices. Besides these long-time changes, production has varied greatly from year to year, mostly because of variations in weather.

## Large Regional Shifts

Regionally, apple production trends in the different important producing areas have varied significantly from the trend for the country as a whole. New York was the leading apple State until the early 1920's when Washington took the lead. In New England and New York—the oldest apple area—production increased until the early 1900's and declined sharply following the freeze damage in the winter of 1917-18. Losses were especially heavy in Baldwins, the predominant variety in this section. Production has declined moderately since the early 1920's. In the Central States peak production was reached about the turn of the century and has declined gradually since then. The level of production in the Shenandoah-Appalachian area has changed little since about 1910, although production has varied greatly from year to year. In the West, large plantings prior to World War I came into commercial bearing in the early 1920's, and a peak production was reached in the late 1920's and early 1930's. There is less year-to-year variation in

production in the West than in the East.

The production of high quality fruit to meet the discriminating demands of present day markets requires specialized knowledge and skills. Commercial growers give trees better care and increase the proportion of better grades of apples as well as production per tree. Apple production has gradually shifted from the predominantly small farm orchard type of production of the late 19th century to the predominantly commercial production of today. The shift was greatest in the Eastern and Central States. Production in the West was established mostly on a large-scale commercial basis from the start. The importance of commercial production is indicated by 1939 census figures which show that 3 percent of the United States' apple farms reported 59 percent of the apple trees and 75 percent of the production. And there probably has been some further increase in the proportion of apples produced on the larger commercial farms since 1939.

#### Over Half for Fresh Use

Since 1934, fresh sales have varied from 60 to 70 percent of commercial

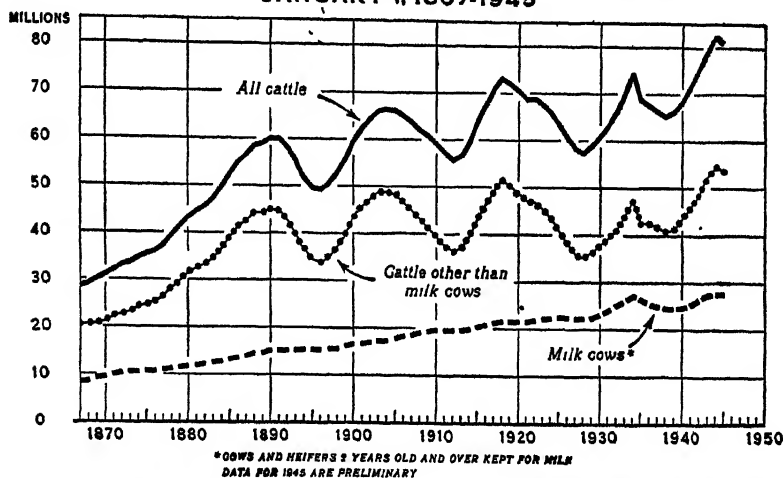
production, with a greater proportion usually sold fresh in years of small crops. Fresh sales of apples comprise a larger proportion of the total crop than those of any other major fruit except oranges and lemons. This is due partly to the long harvest season for apples, but primarily to the long winter storage period of many of the best varieties.

Varying somewhat with the size of the crop, an average of about 6½ million bushels of apples are utilized on farms where grown for table use, canning, preserving, cider and vinegar. For the United States as a whole, about 5 percent of the commercial crop ordinarily is used on farms where grown.

#### Proportion Processed Increasing

Quantities of apples utilized for commercial processing vary from year to year, depending on the size of the crop. In most years about a fifth of the crop has been processed. However, in 1941 and 1942 more than a fourth of commercial production was processed primarily as a result of government programs and improved returns from processing outlets. Processing of apples is an important in-

**ALL CATTLE: NUMBER ON FARMS, UNITED STATES,  
JANUARY 1, 1867-1945**



dustry in New York, Pennsylvania, Virginia, West Virginia, Michigan, Washington, Oregon and California.

The amount of apples used for canning has averaged about 7 percent of commercial production since 1934. The quantity varies widely from year to year depending largely upon the relative size of the crop in the sections having canning facilities. The largest quantity canned since 1934 was 12,338,000 bushels from the 1941 crop. The lightest canning season was from the 1938 crop—only 4,807,000 bushels. New York and Pennsylvania are the most important States in the canning of apples and since 1934 an average of almost 2,000,000 bushels per year were canned in each of these States. The two next most important States are Virginia and Washington.

The quantity of apples used for drying, including dried chops later used for apple butter, also varies widely from year to year, but to a less extent than for canning. Since 1934, apples processed in drying plants have varied from 9,146,000 bushels in 1935 to 4,268,000 bushels in 1940. The principal drying sections are the Sebastapol and Watsonville districts of California, the Yakima and Wenatchee Valleys of Washington, western New York, and the Winchester area of the Shenandoah Valley in Virginia. Drying has been developed in important commercial areas partly to provide an outlet for surpluses in seasons of large crops and partly as a reasonably profitable means of marketing fruit regularly.

Other processing outlets have increased moderately during the past 10 years from an average of about 10 percent of production, or about 12 million bushels during the 6-year period 1934-39 to an average of about 12 percent of production or about 14 million bushels during the 6 years 1939-44. This is largely the result of increased quantities of apples being used for freezing, apple butter, and apple juice. Production of apples for freezing has in-

creased sharply during the past few years. From the 1944 crop, 2½ million bushels or 2 percent of the crop was so utilized. This is about 2½ times the quantity frozen in 1943. Apple pie being the most popular American dessert, pie bakers and restaurants are using large quantities of frozen apples as well as fresh apples out of storage for this use. Retail consumers are also using large quantities of frozen apples and apple sauce. Vinegar products are an important utilization of apples, especially in large crop years.

#### **Normally Exports Are Big**

From the early 1920's until the outbreak of World War II, the export market was an important outlet for American apples. Exports varied greatly from year to year, with the total generally large in years of heavy production and small in short-crop years. The 1926 crop of 230 million bushels was the second largest of record with the record quantity of 21 million bushels of fresh apples exported. But of the short 1936 crop of 117 million bushels only 6.8 million bushels of fresh apples were exported. Important quantities of U. S. apples also have been exported as dried and canned apples. In terms of fresh-equivalent (fresh plus dried plus canned) exports totaled 26.6 million bushels in 1926 and 10.6 million in 1936. Following World War I exports did not reach large volume until 1923.

In the years immediately preceding World War II exports of fresh apples totaled 7 million bushels in 1936, 11 million in 1937, 12 million in 1938, and only 3 million bushels in 1939. In terms of fresh equivalent apples (fresh plus dried plus canned) exports amounted to 11 million bushels in 1936, 16 million in 1937, 18 million in 1938, and 6 million in 1939. During the war years commercial exports were very small but, of course, large quantities of apples were purchased by governmental agencies for the armed forces and lend-lease.

Before the war the United Kingdom was the leading importer, and continental Europe was the next best customer, both taking about nine-tenths of this country's exports. Chief competitors in the European market were Canada in the fall and winter and Australia and New Zealand in the spring and early summer months. The

re-entry of United States apples in appreciable volume into foreign markets may depend largely upon arrangements for financing purchases, trade agreements and relative prices.

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## More Production With Less Labor in Vermont

**D**ESPITE a 1944 labor force on Vermont farms 7 percent smaller than 1942, production per farm was 7 percent larger and production per man was 15 percent greater.

These conclusions are based upon a study of 137 representative Vermont farms to determine changes that have taken place in the size, composition, and accomplishments of the labor force during the April to October cropping periods of 1942, 1943, and 1944.

An average of 3½ persons per farm worked at some time during the 6-month period of 1944. Some of these workers were employed for only a few days or weeks; and some were unable to do the work of an able-bodied man. Thus this average number of workers was equivalent to about 1½ full-time men working for the cropping period.

Accompanying the change in size was an important change in composition. Only one-half as many regular hired men were employed in 1944 as in 1942. Such a reduction caused a 13 percent decline in the size of the regular labor force—those persons who worked on a fairly definite schedule throughout the 6-month period. The average number of regular workers per farm was equivalent to 1½ full-time men. Of this amount, the operators and their families provided 86 percent; 14 percent was furnished by hired workers.

Part of the decline in the amount of regular labor was offset by the use of more extra labor, especially during

seasons of peak need such as haying or silo filling. Generally, extra labor was hired, but in some cases members of the family were able to take over the extra work. Several operators who ordinarily worked off the farm used their vacation time in summer to do their haying. Wives or children, who did no farm work regularly or worked only a few hours daily, worked full time during haying or silo filling. The average number of extra workers per farm was equivalent to one-third of a full-time man. Of this amount, 54 percent was hired; 46 percent was provided by family workers.

Although the labor problem varied with each farm, generally farmers with large dairies had few changes in their labor force. In contrast, many farmers with medium-sized herds lost regular hired men but made up this loss by using more extra workers, while operators with small dairies had a 20-percent smaller labor force in 1944 than in the same period in 1942. Frequently, these farmers reduced the size of their dairies and worked more hours off the farm.

Wage data indicated that farmers having large dairies paid higher monthly wages per man equivalent than did farmers having medium or small herds. This may explain, in part, why there was little labor change on large farms. The difference between the wages paid by the various groups could have occurred by chance one time in three farms. However, the differences might well have been statistically significant if more cases

had been studied. In contrast to differences in monthly wages, average daily or weekly wage rates on farms with large, medium, or small herds were very similar.

### Greater Output Per Worker

In spite of less labor, the 137 operators increased their production. Using productive work units as a measure, production per farm was 7 percent larger in 1944 than in 1942. Increases came about largely through greater output per worker. Only on farms with less than 10 cows did average output per man decline. On these farms, the number of cows was reduced by 27 percent.

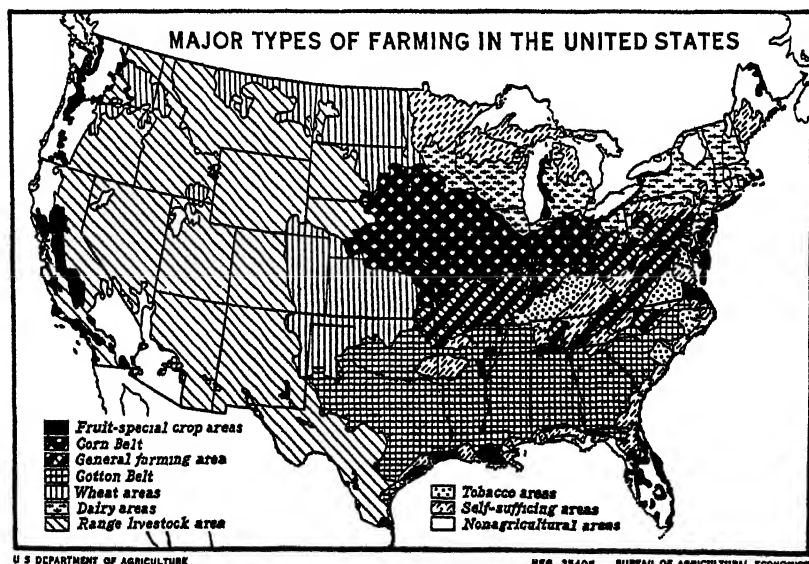
To indicate the relationship between production and available labor, three groups of farmers were studied—those who made large increases in production, those who made large decreases, and finally, those who made very little change. Farmers who made large increases in production between the 1942 and 1944 crop periods did so largely by increasing output per man. Where large decreases occurred, frequently the operators had been using labor very

effectively and when labor was lost or an emergency arose, the workers could not carry the extra burden, and production was lower. On farms that made little change in production between 1942 and 1944, there usually was sufficient reserve in the labor force to meet situations such as sickness, loss of hired labor, and some expansion of enterprises. On about two-thirds of these farms, this reserve was called upon during the war period; on the remaining third, the reserve was not used and an actual increase in the labor force took place.

Many of the changes resulting in increased efficiency of workers will be continued after the war. The scarcity of help has stimulated labor saving methods and practices. Some additional machines have been added and there is now a strong demand for machines and equipment once they become available. Farmers who continue notable advances in the efficiency of labor through improved practices, will be in a more favorable position in the postwar period.

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All live-stock
1910-14 average.....	88	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	158	161	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	178	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	100	155	145	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	192	234	139	150	148	212	162	146	171	164
1941.....	162	169	127	131	132	154	139	121	146	140
1942.....	199	241	144	152	150	201	162	151	188	173
1943.....	239	318	151	167	162	264	193	190	209	200
1944.....	235	329	152	176	170	315	198	174	200	194
1944—December.....	232	326	153	178	171	324	203	211	198	203
1945—January.....	234	326	153	179	172	324	202	199	203	202
February.....	236	324	154	179	172	324	200	183	200	201
March.....	235	322	154	190	173	335	198	175	211	200
April.....	230	314	154	190	173	335	191	176	215	201
May.....	226	302	155	190	173	335	192	170	217	202
June.....	220	301	155	190	173	340	191	189	216	203
July.....	211	287	155	180	173	362	192	197	215	205
August.....	187	260	154	180	173	362	195	207	212	206
September.....	171	223	154	181	174	362	197	201	207	203
October.....	163	217	155	182	175	355	199	204	202	202
November.....	171	221	156	182	175	355	202	218	203	206
December.....	171	221	156	183	176	355	204	222	204	207

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio <sup>1</sup>
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1910-14 average.....	100	101	102	96	98	99	-----	99	100	100
1915-19 average.....	103	104	187	168	187	125	-----	168	162	106
1920-24 average.....	147	126	192	189	149	148	* 143	160	151	86
1925-29 average.....	140	119	172	145	129	141	140	143	149	80
1930-34 average.....	70	76	119	74	72	94	106	86	90	66
1935-39 average.....	94	95	175	83	106	83	102	97	107	84
1940-44 average.....	123	110	245	131	159	133	172	143	154	103
1941.....	97	80	150	107	130	85	129	106	124	94
1942.....	120	111	252	149	172	114	103	142	159	106
1943.....	148	147	325	160	190	179	245	183	192	119
1944.....	165	166	351	164	209	215	212	194	195	115
1944—December.....	167	160	364	168	215	206	223	196	200	117
1945—January.....	169	163	365	163	214	205	202	200	201	117
February.....	169	164	360	161	215	211	223	197	199	116
March.....	171	166	359	163	215	211	203	196	198	114
April.....	172	162	362	163	215	221	209	204	203	117
May.....	172	161	363	165	216	227	198	198	200	116
June.....	173	162	364	169	217	237	209	210	206	119
July.....	169	161	364	171	221	237	244	207	206	119
August.....	167	158	367	172	215	214	240	202	204	118
September.....	167	157	365	175	213	217	159	191	197	113
October.....	175	160	373	180	210	219	181	196	199	114
November.....	178	161	375	182	213	217	235	203	205	117
December.....	178	162	378	184	213	230	223	206	207	118

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income adjusted for seasonal variation, revised September 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# SPRING PLANTING ISSUE

## THE

# AGRICULTURAL

## • SITUATION •

**FEBRUARY 1946**

*A Brief Summary of Economic Conditions*

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**F**ARMERS throughout the country are now making their final spring planting decisions for the greatest peacetime agricultural output in history—to meet a probable unprecedented peacetime demand, both domestic and foreign. While the 1946 prospective food consumption per capita in the United States will average at least 11 percent *above* prewar, per capita food supplies in other parts of the world now average 12 percent *below* prewar. \* \* \* Production goals for 1946 were being reviewed in mid-February, in light of increased needs. Livestock numbers in the aggregate are likely to continue in 1946 near the high levels of 1945. \* \* \* Domestic wheat supplies are not sufficient to permit unlimited use in this country and at the same time meet critical export requirements. Because of the importance of wheat and flour in alleviating the critical food shortage in many parts of the world, the President in early February asked various agencies to institute emergency measures for curbing the use of wheat in this country. The new bread flour resulting from the measures will enhance slightly the nutritive content of the average diet, and save wheat to help prevent starvation in other parts of the world.

# Commodity Reviews

## FOOD GRAINS

**M**ARKETINGS of wheat to satisfy large domestic and export requirements have been held down by the relatively small volume of farm wheat sales and by the shortage of railroad cars. The demand for rice for shipments and exports continues heavy, with the result that domestic per capita consumption probably will again be slightly below average. As rye disappearance is at an annual rate larger than production in 1945, stocks by next July will be very small.

World requirements for wheat and flour are considerably in excess of available supplies in exporting countries. Exports from the United States will be as large as is consistent with domestic requirements for current use and carry-over. If wheat moves freely from farms in the next few months, the July 1 carry-over might drop to about 150 million bushels. The 1932-41 prewar average carry-over was 235 million bushels, with a low of 83 million in 1937.

Buyers are having considerable difficulty in obtaining wheat. A large part of the present supply is located on farms, particularly in the area from North Dakota to Kansas and in the Pacific Northwest. Of the January 1 total stocks of 689 million bushels, 369 million were still on farms.

The 1946 winter wheat production was indicated at about 750 million bushels in December, based on average growing conditions for the rest of the growing season. If the winter crop is as indicated, and the spring wheat crop is about average, 1946 will provide another billion-bushel total harvest.

Large supplies of rice were available from the record 1945 crop. However, the heavy demands for relief feeding in the Pacific areas, as well as for commercial exports and usual ship-

ments to the territories, contributed to reducing domestic rice consumption slightly below the 1935-39 average of 5.7 pounds of milled rice per capita. The production goals for 1946 call for an acreage only slightly less than the record in 1945.

Rye consumption is currently above the 1945 level of 3.2 pounds per capita, although short supplies have curtailed the use of this grain for feeding and for the production of alcohol and spirits. Acreage of rye sown for all purposes in the fall of 1945, at 3.72 million acres, is 17 percent less than that sown for the previous crop and 41 percent less than the 10-year (1934-43) average. The reported condition on December 1 was 83 percent of normal, 5 points below the condition a year earlier, but 7 points above the 10-year average.

## FEED

**C**OMMERCIAL supplies of feed grains and byproduct feeds, although large, were insufficient in January to meet the unusual demand at ceiling prices. Keen competition in purchasing feed concentrates is expected to continue through spring.

Use of high-protein feeds in the manufacture of mixed feeds was restricted in an order issued by the Department in mid-January. In the first 9 months of 1945, nearly as much high-protein feed was used by 633 reporting plants in making commercial mixed feed as in all of 1943 and 1944, and more was used in the 9-month period than in all of 1942.

Combined disappearance of corn, oats, and barley during October-December was 9 percent larger than in the corresponding quarter of 1944, and only 2 percent smaller than in that quarter of 1943, when disappearance was the greatest on record.

Disappearance of all corn during October–December 1945 was 8 percent more than a year earlier, disappearance of oats was 36 percent more, but barley disappearance was 15 percent less. Disappearance of hay during May–December 1945 was 10 percent greater than in the same period of 1944. The quantity of wheat used as feed since July was substantially less than the record quantity fed during the corresponding period of 1943, but materially more than was fed during July–December in most earlier years. Disappearance of all feeds is expected to continue large, at least through the first half of 1946.

Stocks of corn, oats, and barley on farms and at terminal markets on January 1 totaled 74.5 million tons, 2 percent less than on January 1, 1945. Stocks of corn were the smallest for that date in 7 years, barley stocks were the smallest for January 1 since 1938, but stocks of oats were larger than on any other January 1 for which records are available. Carry-over of corn, oats, and barley at the end of the current marketing year may be 2 million tons less than the 14.2 million tons on hand at the end of the 1944–45 marketing year, with all of the reduction occurring in corn and barley. Stocks of wheat also will be reduced. Prices of feed grains, except oats, will average higher this season than last.

Stocks of hay on farms January 1 were the second largest in 9 years for which January 1 farm stocks have been estimated, being exceeded only in 1943. Hay prices this season have been moderately lower than the near-record prices in 1944–45.

The President's directive of early February asking emergency measures to help meet critical world food needs will result in less utilization of feed grains in beverage alcohol and in some increase in exports. Also wheat feeding will be restricted and wheat mill-feed output will be reduced.

## LIVESTOCK

**T**OTAL livestock numbers on farms showed a slight gain in 1945, with an increase in numbers of hogs and chickens more than offsetting a decline in numbers of cattle, sheep and lambs, and horses and mules. At the beginning of 1946 there were 146.5 million grain-consuming units of livestock (including chickens) on farms and ranches, compared with 146.2 million a year earlier.

About 62 million hogs were on farms at the start of 1946, 2½ million more than a year earlier, but 25 percent less than the record number at the beginning of 1944. Cattle numbers declined 2.7 percent in 1945. Total cattle numbers at the beginning of 1946 were estimated to be 80 million head, only 3.2 percent below the all-time high of January 1, 1944. The total number of sheep on farms at the beginning of 1946 was 44 million head, 7 percent less than the year before and 22 percent less than on January 1, 1942.

A further decline in cattle numbers, both of milk cows and other cattle, is in prospect this year. Numbers of horses and mules will continue to decline. Sheep numbers probably will decline also, but the rate of decline is likely to be less than in each of the preceding 4 years.

Meat output in 1946 is likely to be moderately greater than in 1945 and perhaps 40 percent above 1935–39. Hog slaughter will be larger than in 1945, as a 12 percent increase from 1944 is indicated in the 1945 fall pig crop that will be marketed chiefly in the spring and summer. Also, an increase from 1945 is in prospect for the 1946 spring pig crop that will be ready for market late this year.

Stocks of meat in commercial warehouses and meat-packing plants increased in January in spite of strikes in packing houses. Meat stocks in cold storage normally increase during January. Pork stocks on February 1 continued at a record low for the sea-

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1910-14 average	100	100	100
1915-19 average	162	150	106
1920-24 average	151	173	86
1925-29 average	149	168	89
1930-34 average	90	135	66
1935-39 average	107	123	84
1940-44 average	154	143	103
1945 average	202	174	116
<b>1945</b>			
January	201	172	117
February	199	172	116
March	198	173	114
April	203	173	117
May	210	173	116
June	206	173	119
July	206	173	119
August	204	173	118
September	197	174	113
October	199	175	114
November	205	175	117
December	207	176	118
<b>1946</b>			
January	206	177	116

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

son. Beef stocks in cold storage on February 1 were larger than on January 1, and above average for that date. By the end of January, the plants of the four major meat packers were back in operation under Government control. During the 10-day strike, about 60 percent of the federally inspected slaughter capacity of the country was affected; about 40 percent of the total commercial slaughter was held back.

Meat animal prices declined less than seasonally during the fall and early winter. Prices received by farmers for cattle averaged the highest on record for the season. Hog prices declined only slightly below ceilings in early January, as marketings of 1945 spring-crop hogs approached the peak for the season. Prices of all meat animals probably will continue high throughout the first half of this year, but prices of hogs may decline in the late spring when marketings of the large 1945 fall pig crop reach their peak.

## DAIRY PRODUCTS

**P**ROCESSOR subsidies on Cheddar cheese were discontinued on February 1. The removal of the subsidy will be accompanied by increases in wholesale price ceilings on Cheddar cheese of 3½ to 4 cents per pound and in retail ceilings by 5 cents. This will not immediately affect prices received by farmers for milk in cheese areas, since cheese supplies probably will continue short of demand until midyear.

The gap between supply and demand for dairy products in November through January was the widest of the war period. Continuation of the high level of consumer purchasing power maintained a strong demand, while supplies reached a seasonal low point.

With supplies increasing seasonally, the gap between supply and demand at current prices, except for butter, is expected to disappear by midsummer. Under present price ceilings, prices received by farmers for whole milk may average slightly lower in 1946 than in 1945, while butterfat prices will be about the same. On the other hand, if price ceilings are raised or removed, moderately higher prices for whole milk and materially higher prices for butterfat are expected.

Milk production during 1945 reached an all-time high of over 123 billion pounds, 4 percent above 1944. This record level of production was due to the high rate of milk production per cow, almost 4,800 pounds, which exceeded any previous year. Favorable pasture conditions, ample feed supplies, and record unit returns were responsible for the high level of production per cow.

## POULTRY AND EGGS

**U**NDER the 1946 price support program for eggs, announced late in 1945, purchases of dried whole, frozen, and graded shell eggs are to be made so that prices received by farmers may

average 29 cents per dozen nationally and 27 cents in the Midwest during the flush production season. This average price is expected to return at least 90 percent of parity, as required by the Steagall Amendment.

National goals for poultry and egg production in 1946, compared with indicated 1945 output, call for a decrease of 15 percent in egg production, 17 percent in the number of chickens raised, and of 10 percent in the number of turkeys raised. No goal for commercial broiler production in 1946 has been set.

Civilian demand for eggs in 1946 is expected to remain fairly strong although it will be weaker than in 1945 when consumer incomes were at a record level and supplies of meat were short. Per capita consumption of eggs may be as much as 10 percent below the 1945 consumption of about 390 eggs per person. Civilian demand for chickens and turkeys in 1946 is expected to be moderately below 1945. Production of poultry meat in 1946

may not be much different from that in 1945. Prices received for chickens and turkeys probably will average moderately lower in 1946 than in 1945.

Farm egg production in 1945 totaled 4.6 billion dozen, 5 percent below the 1944 record, but otherwise exceeding any previous year. An outstanding development was the record rate of lay which during 1945 averaged 118 eggs per hen and pullet on farms January 1, 1945. This rate of lay was 6 eggs above 1944 and 20 percent higher than in prewar years.

## FATS AND OILS

GRADUAL improvement in civilian supplies of fats and oils is likely this year. For 1946 as a whole, the total supply of both edible and industrial fat-and-oil products will be more than the 65 pounds per capita available in 1945, although less than the prewar average of 74 pounds per capita. The increase in supplies will come mainly from an increase in domestic production of fats and oils,

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Jan. 15, 1945	Dec. 15, 1945	Jan. 15, 1946	Parity price Jan. 15, 1946
	August 1909- July 1914	January 1935- December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.46	1.54	1.54	1.56
Rice (bushel).....do....	0.813	0.742	1.81	1.81	1.80	1.44
Corn (bushel).....do....	0.042	0.091	1.07	1.09	1.10	1.14
Oats (bushel).....do....	0.399	0.340	0.721	703	717	705
Hay (ton).....do....	11.87	8.87	17.10	15.40	15.70	21.00
Cotton (pound).....cents..	12.4	10.34	20.20	22.84	22.36	21.95
Soybeans (bushel).....dollars..	0.96	0.954	2.06	2.09	2.09	1.70
Peanuts (pound).....cents..	4.8	3.55	8.14	8.32	8.37	8.60
Potatoes (bushel).....dollars..	0.697	0.717	1.57	1.37	1.45	1.29
Apples (bushel).....do....	0.96	0.90	2.46	3.34	3.53	1.70
Oranges on tree, per box.....do....	1.81	1.11	1.98	2.71	2.12	2.08
Hogs (hundredweight).....do....	7.27	8.38	13.80	14.20	14.10	12.90
Beef cattle (hundredweight).....do....	5.42	6.56	11.60	11.50	11.50	9.59
Veal calves (hundredweight).....do....	6.75	7.80	12.90	13.50	13.60	11.90
Lambs (hundredweight).....do....	6.88	7.79	12.90	12.90	13.00	10.40
Butterfat (pound).....cents..	26.3	28.1	50.9	50.5	50.7	48.4
Milk, wholesale (100-pound).....dollars..	1.60	1.81	3.24	3.40	3.38	3.00
Chickens (pound).....cents..	11.4	14.9	24.2	23.8	23.5	20.2
Eggs (dozen).....do....	21.5	21.7	41.0	48.2	41.1	38.9
Wool (pound).....do....	18.3	23.8	40.7	40.8	40.1	32.4

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section

3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

particularly lard and linseed oil. Export supplies of fats and oils from the Far East and other surplus-producing areas also will be larger in 1946 than in 1945, although still substantially below prewar. The first substantial output of whale oil since before the war is now being produced by British and Norwegian whaling fleets in Antarctic waters. United States imports of flaxseed from Argentina, copra from the Philippines, and tung oil from China will increase in 1946.

With national income continuing at a high level, consumer demand for fats and oils in the United States will remain strong in 1946. Export demand also is strong. In addition, as stocks of most fats and oils were unusually low at the beginning of 1946, there will be a strong demand for fats and oils to build up inventories. The total demand, at present prices, will exceed the supply. If price ceilings are raised or removed in 1946, prices of most fats and oils will advance.

The 1945 cottonseed crop, at 3,703,000 tons, was 24 percent smaller than a year earlier and the smallest since 1921. Cottonseed-oil output in the first half of 1946 will be unusually low, reflecting the small crop.

Production of peanuts picked and threshed, at 2,080 million pounds, was only 1 percent smaller than in 1944, and the 1945 soybean crop, at 191.7 million bushels, was 1 percent larger than a year earlier. With a relatively large acreage of flaxseed planted in 1945 and with good growing conditions, flaxseed production amounted to 36.7 million bushels, 59 percent more than in 1944.

Acreage goals for oilseeds in 1946 call for a 6 percent larger acreage of flaxseed to be planted than in 1945 but 12 percent fewer acres of soybeans harvested for beans and 21 percent fewer acres of peanuts picked and threshed. The cotton goal is 20.2 million acres, 11 percent more than

in 1945. Average returns of \$3.60 per bushel, Minneapolis basis, have been guaranteed for flaxseed produced in 1946. This is equivalent to an average of about \$2.40 per bushel to growers and is nearly the same as average returns for 1945 crop flaxseed, counting the \$5-per-acre payments on a per-bushel basis. Prices of farmers' stock peanuts will be supported at an average of 90 percent of the parity price on July 15, 1946. On the basis of the mid-January 1946 parity, this would be about 7 percent below the average price for the present season.

## FRUIT

THE 1945-46 citrus fruit crop aggregating about 7.7 million tons, fresh basis, is a new record. If production turns out as large as expected, this will be the fourth consecutive crop to exceed production in the preceding year.

The 1945-46 grapefruit crop of 63 million boxes will establish a new record. This crop is about one-fifth larger than in 1944-45, when production was drastically reduced by a tropical storm. The California lemon crop of about 14 million boxes this season is about one-tenth larger than the preceding crop. On the other hand, the 1945-46 crop of oranges and tangerines, estimated at 110 million boxes, is slightly smaller than the record large 1944-45 crop.

Production of California oranges is smaller this season than last, that of Texas grapefruit is about the same, and that of Florida oranges and grapefruit is larger. The season for Florida oranges and grapefruit is expected to extend further into the summer than last year, because significant percentages of these crops consist of late-bloom fruit. Supplies of fresh citrus are expected to continue plentiful this winter and spring.

Supplies of commercial apples from storage this winter and spring will be only about half as large as a year

earlier, mainly because the 1945 crop was very short. However, supplies of pears from storage will be slightly larger than a year ago. Judging from the strawberry acreage, which is about one-fifth larger this year than last, production this spring may be considerably larger than a year earlier, though still much smaller than before the war.

Imports of other fruits, especially bananas, constitute an important part of current fresh fruit supplies. Imports of bananas, although on the increase, may not reach pre-war levels for a year or two. Later in the year, imports of fresh and canned pineapples will become of considerable importance. As usual, relatively small quantities of citrus fruits will be exported, mainly to Canada. Only minor quantities of deciduous fruits have been exported thus far this season.

## VEGETABLES

**W**INTER-SEASON total production of 18 truck crops for fresh market shipment is indicated to be 44 percent above the 10-year (1935-44) average and smaller only than the production of 1944 and 1945. Of crops shipped to market out of current production, quantities should show the largest percentage increases over last winter for lima beans, cauliflower, celery, cucumbers, escarole and lettuce. Movement of storage cabbage and carrots will be larger than last winter, but dry onions will continue to be scarce.

Storage stocks of cabbage in the hands of growers and local dealers on January 1 are placed at 68,000 tons, or about 15 percent of the 1945 record high production of Danish (storage) type cabbage. Holdings this year are slightly more than three times as large as the record-low stocks on hand January 1 a year ago and about 22 percent above the 10-year (1935-44) average. Storage stocks of onions on January 1, 1946, at 5,722,000 sacks

(50-pound), were the lowest January stocks since 1932 and less than half the holdings a year earlier. Average holdings on January 1 are a little more than 7 million sacks. Disappearance of the 1945 crop before January 1 this year amounted to 79 percent of the total production of the late summer crop, compared with 68 percent last year and the 10-year average of 70 percent. Disappearance to January 1 this year constituted the largest percentage on record for the period.

Stocks of merchantable potatoes held by growers and local dealers in or near areas of production on January 1, estimated at a little more than 119 million bushels, were considerably larger than average and assure a plentiful supply of potatoes at least until the new crop potatoes begin moving in volume.

Carlot movement of potatoes since last September has been considerably smaller than might be expected in relation to the size of the very large 1945 crop. Shipments in December 1945, were less than in the same month a year earlier. On the other hand, very substantial quantities of potatoes have been purchased and diverted by the Government, and additional large quantities have been exported. Total exports of potatoes in the 1945-46 crop year may be over 15 million bushels.

Remaining stocks of sweetpotatoes, on the other hand, are expected to be insufficient to supply the demand at ceiling prices. Last year's crop was slightly below average and shipments to date have exceeded those of a year earlier, although the 1944 crop was about 7 percent larger than the 1945 crop.

## TOBACCO

**D**ISAPPEARANCE of leaf tobacco is continuing at a high level, although below the wartime peak. Domestic manufacturing during 1945 was at a peak, despite the cut in mili-



tary purchases and the sharp drop in industrial employment and factory payrolls. Total domestic use in 1946 may be substantially less than in 1945, although that of some types may increase.

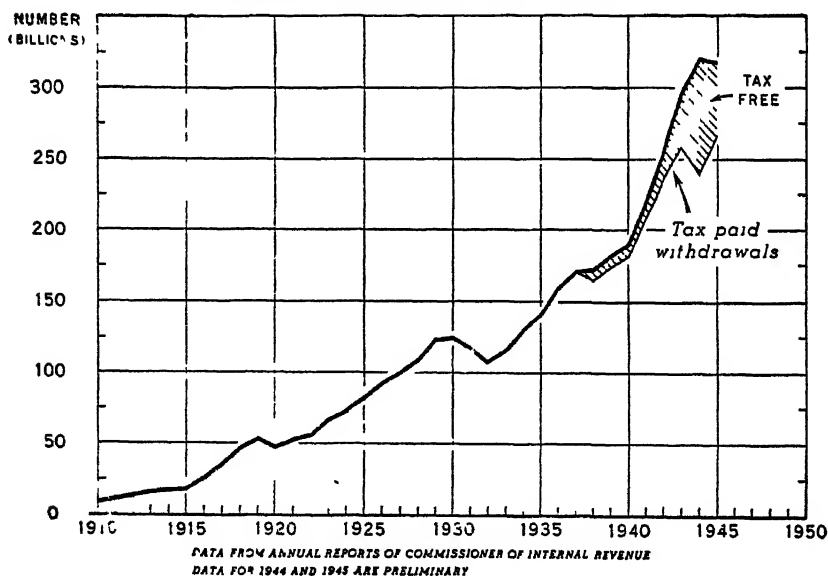
Approximately 335 billion cigarettes were produced by domestic manufacturers in 1945, or about 15 billion above 1944. Of this total, about 275 billion were for domestic use and 60 billion were shipped overseas. The present monthly rate of domestic cigarette consumption, as measured by sales of revenue stamps, is higher than a year ago, but below the peak of last October. Domestic cigar consumption in 1945 totaled about 5.1 billion, compared with a wartime peak of 6.2 billion in 1942, and a 1934-38 average of 5.2 billion. Consumption of chewing tobacco, smoking tobacco, and snuff is continuing at a high rate but below the wartime peaks.

Demand for leaf tobacco is exceptionally strong again this season, and

prices of most all types except burley are at or near all-time highs. Despite the sharp drop in burley prices, tobacco growers generally are expected to receive more than 900 million dollars from the 1945 crop, compared with 816 million for the 1944 crop. The 1945 production, now placed at 2,041.8 million pounds, constitutes the largest volume of tobacco ever produced in any single year in this country. Price ceilings apply to all types of 1945 crop except cigar and dark tobacco.

Tobacco acreage goals for 1946 call for an increase in all major types except burley and dark air-cured. In view of the large carry-over and the size of the 1945 crop of burley tobacco, a smaller burley acreage than in 1945 has been recommended. Goals are based on the present level of stocks of the various types of tobacco, the probable domestic and foreign requirements, and tobacco production capacity within each tobacco-growing state

### CIGARETTE PRODUCTION IN THE UNITED STATES, 1910-1945



# Prospective Crop Yields in 1946

**P**EACETIME demands for American farm products continue strong but in varying proportions for different commodities. The world looks to the United States to furnish products of the soil in perhaps greater quantities than any other nation on earth. Farmers throughout the Nation are now making their final plans for 1946 farm production. The broad pattern of this production, however, has been in the making for several years—a normal sequence, because the outcome of one year influences the plans for the next.

Indications now point to 1946 crop yields per acre, with average growing conditions, nearly 30 percent higher than during the 1923-32 predrought period though slightly below the 1945 level. Yields in 1946 should average at least the fourth highest of record, being below only those of 1942, 1944 and possibly 1945. These prospects will, of course, change from month to month as the season advances. Should weather be more favorable than average, aggregate yields per acre could easily go higher than this and equal or exceed those of 1945, which averaged about 30 percent above the predrought period. On the other hand yields could be lower than now anticipated if even a few bad "breaks" occur in the weather or should unusual outbreaks of disease and insects ravage big areas of crop production. However, severe outbreaks of drought, disease, insect and other adverse conditions seldom strike all parts of the Nation during any one growing season. During the past 9 years, aggregate crop yields have averaged about 23 percent above the 1923-32 predrought period.

## Factors Favoring Good Yields

It is possible to identify some factors that have determined crop yields in past years and calculate what may be expected, either during a period of years or for individual years, assum-

ing that weather will be about as favorable for crops as the average of past periods. Some allowance can be made for certain facts now known or other probabilities that will have a bearing on yields for the 1946 crop season, as (1) present prospects for winter wheat sown last fall, (2) above-average reserves of subsoil moisture in most of the western half of the country, except in parts of the Great Plains, (3) the probable near-record supplies of fertilizers in prospect, (4) cumulative effects of the heavy applications of lime in the East, (5) the continuing expansion of hybrid corn acreage in and outside the Corn Belt, (6) expanded use of improved varieties of wheat, oats, soybeans, potatoes, sugar crops and many other crops, (7) a continuing tendency toward utilization of the most productive land for such crops as cotton, corn, soybeans, flaxseed, dry beans, potatoes, and a few other crops, (8) price supports and strong demand which go far toward stimulating good care of crops and reducing their abandonment.

Very favorable weather often tends to increase crop yields and production, which sometimes results in lower prices and in incomplete harvesting of some crops. However, during the war favorable prices, coupled with almost unlimited demand, minimized this factor and resulted in more complete salvaging of crops. It now appears that these conditions will prevail again in 1946. However, even in 1945 conditions were so extreme that some crops, such as cotton, rice, and buckwheat, were not completely saved.

Among a few factors, however, which may tend to lower the aggregate yield slightly during 1946 are: (1) the rather poor moisture reserves in large areas of the Great Plains, especially in the Dakotas, Montana, parts of Nebraska, Western Kansas and the wheat areas of Oklahoma, Texas and New Mexico, (2) diversion from crops

to sod, or less intensive cropping of some lands, especially in the Western Corn Belt, Great Plains and the South, which have been heavily cropped during the war years.

After making allowances for weather variations of past years, it is evident that aggregate yields per acre have been rising at the rate of about 1 percent per year for the past 20 years. Weather has, no doubt, been one of the most effective influences in increasing aggregate crop yields the past few years. Wartime prices and conditions also greatly influenced yields. For the country as a whole present weather factors seem somewhat similar to those at the beginning of 1942. However, there is considerable variation by regions.

### Regional Yield Picture

Yield forecasts at this season of the year can best be made by reviewing prospects for each part of the country and for each crop, in comparison with past years. All such forecasts, however, must be accepted with reservations because of the limited period of years for which adequate records of factors affecting yields are available.

The Great Plains area, the 10 States extending from North Dakota and Montana southward through Texas and New Mexico, includes about 40 percent of the country's cropland. Yields in this big, but often unpredictable area have frequently been the key to the national level. Here crop yields are greatly affected by pre-season rainfall. They are highly correlated with moisture measured from the previous September through August of the current year, plus some allowance for the amounts of reserve subsoil moisture and for the adverse effect of hot weather during the summer or growing season. Factors which influence crop yields in other areas do not always exert a comparable influence on yields in this region. Rainfall in this area during the past five crop seasons seems to have been

more plentiful than for any previous 5-year period during the last 50 years. Cool weather during the summer months is usually beneficial for small grains, as may be noted from the effect of the rather cool June last year on wheat yields. Allowing for continued increase in hybrid corn acreage, improved varieties of oats, wheat, and other crops, aggregate crop yields for the Great Plains area this year should be about 10 to 12 percent above the 1923-32 average provided average weather prevails.

Moisture reserves in the Plains area are not as favorable as last year at this time. The best that can be said is that present prospects are not as good as a year ago, but if spring and summer rainfall are about average and summer temperatures are not excessive, much of the probable effect of the present moisture deficiency can be overcome. Present moisture reserves are not sufficient to maintain small grains at optimum conditions. Likewise hay, sorghum grain and corn, will need additional moisture next summer.

In most other areas there seems reason for optimism regarding prospective yields in 1946. Almost everywhere east of the 100th meridian and in the northern Mountain and Pacific Coast States soil moisture reserves are adequate. The disappearance of snow cover over most States east of the Rockies during early January, under the influence of mild temperatures, however, may be detrimental to fall-sown grains if severe cold weather should come before another snow. In the Northern States east of the Great Plains and also in the seven States west of the Rockies, areas having about 34 and 6 percent, respectively, of the nation's cropland, composite yields of field crops should equal and probably exceed those of 1945, assuming average weather, but yields in individual States may differ materially.

In the far West, particularly the Pacific Northwest, moisture reserves

are ample and prospects now appear the best for many years. Irrigation water prospects in the Columbia River basin are very good, with adequate supplies already assured as a consequence of large carry-over storage in reservoirs and a snow pack almost as great as is usually measured on April 1. Preliminary reports indicate that water prospects in most other Western irrigated areas appear ample. Recent floods in some sections of Washington and Oregon are not expected to have appreciable effects on 1946 crop yields.

The Western Corn Belt suffered from the wet spring last year, and elsewhere in the Corn Belt one or more crops suffered from wet weather, dryness or frosts. In the South, east of Texas and Oklahoma, an area comprising about 20 percent of the crop land, prospects are that the yields of cotton and grains, with the possible exception of corn, will exceed those of last season. This assumes that the quantity of fertilizer used will continue at a record or near-record level, which seems probable with the adequate over-all supply that is expected to be available in 1946.

### Crop-by-Crop Appraisal

A more accurate appraisal of the aggregate crop yield level can be made by reviewing the record for each crop separately. It is possible to adjust yields obtained in any year to the level that they would have been with average weather. This can be done by using the reported condition at harvest-time. Comparing the adjusted yields for a series of years, the year-to-year changes due to such developments as hybrid corn, new varieties of other crops, liberal use of more suitable fertilizers, shifts to irrigated land or high-yielding areas and other factors can then be seen. This analysis shows that under present conditions the trend in crop yields continues upward. Taking into consideration such factors, the most probable yield of corn in the United States this year appears to be

about 33 bushels per acre. This would be about equal to that of the past 2 years, and except for 1942, would rank among the highest of record. Should the 1946 acreage equal the national goal of about 96½ million planted acres, and abandonment be about 3 percent, a crop bigger than last year's production of 3 billion bushels would result.

The December estimate of the current winter wheat crop indicated another increase in acreage planted, with a yield of 16.3 bushels per harvested acre. Even with subsoil moisture somewhat unfavorable in some areas of the spring wheat country, especially the Northern Great Plains States, it seems reasonable to expect an average yield per acre of about 16 bushels for all wheat and a total wheat crop exceeding a billion bushels, but by a smaller margin than in the past 2 years.

The splendid performance of some new varieties of oats, coupled with big acreages and very favorable weather, resulted in a 1945 yield of over 37 bushels per acre. New varieties of bright promise continue to be developed. Even so, current factors point to about 33.5 bushels for 1946. Barley prospects indicate a yield of about 23.5 bushels.

The December estimate of the 1945 yield of cotton was 250 pounds per acre, though considerable cotton remained to be picked in a few States. A study of current factors, assuming that cotton will continue to go on the more productive cotton land, continued use of near record applications of fertilizers, and continued technological improvement in production methods, all point to a yield of about 266 pounds per acre for 1946. This would be the fourth highest of record, exceeded only in 1937, 1942, and 1944.

With the high price of tobacco which has prevailed for several years and the fact that tobacco land will continue to be well fertilized in 1946, a yield of about 1,080 pounds seems possible.

This yield has been exceeded only twice, in the last 2 years.

There has been a sharp upward trend in potato yields in recent years, with the 1945 yield being the highest of record. The shift toward the concentration of acreage in the high-yielding commercial areas is one of the major factors contributing to higher yields for the country as a whole. Other factors contributing to better yields are improved cultural practices and the use of new and higher yielding varieties with a larger proportion of the acreage planted to certified seed. Some reduction in the acreage grown in commercial areas is expected in 1946. There is a record supply of certified seed and under normal growing conditions a yield of about 140 bushels per acre—a yield about equaled in 1943 but exceeded only by the 1945 yield of 151 bushels—can be reasonably expected. There seems to be no definite trend in sweetpotato yields but a yield of about 88 bushels per acre appears to be a reasonable expectation.

Reduction in soybean acreage seems probable this year. Improved varieties are affecting soybean yields. Taking into consideration such factors, a yield of about 18.6 bushels seems possible in 1946, the fourth highest of record. If the 1946 goal is reached, a

crop of about 175 million bushels would result. Yields of about 660 pounds of peanuts and about 875 pounds of dry beans per acre may be expected this year, considering the probable distribution of the acreage.

Yields of flaxseed and rice have been little affected by acreage shifts but acreages of both crops were increased last year. They are generally grown in well-defined areas. About 8.8 bushels of flaxseed and about 47 bushels of rice per acre are all that should be expected this season.

Sorghum grain yielded only about 15 bushels in 1945, although the average yield was about 18 bushels during the previous four seasons. Late planting and early frosts reduced yields last year. Allowing for current factors and performance under like conditions in past years, a yield of about 16 bushels seems possible.

Due to late spring freezes and poor pollination the 1945 apple production was the lowest of record. With high prices and strong demand, orchards are receiving better care. Under average conditions it seems that this year's yields per acre should be about double last year. Barring unusual losses from freezes and storms, 1946 yields per acre of bearing trees for apples, other deciduous tree and vine fruits, and citrus, as a group, should

1946 Prospective Crop Yields per Harvested Acre, United States Average with Comparisons

Years	All corn	All wheat	Oats	Barley	Tame hay	Cotton	Soy- beans	Dry beans	Pota- toes	To- bacco	28 crops (percent of 1923- 32 aver- age) <sup>1</sup>
	Bu.	Bu.	Bu.	Bu.	Tons	Lb.	Bu.	Lb.	Bu.	Lb.	Pct.
1880-99.....	25.9	13.4	27.5	23.7	1.25	182	---	---	82	732	-----
1900-19.....	20.6	14.3	29.9	23.2	1.31	185	---	---	96	818	-----
1923-32.....	23.4	14.4	30.2	22.6	1.28	170	12.9	667	112	770	100.0
1934-43.....	20.8	14.7	29.6	22.3	1.34	231	17.6	872	124	926	111.9
1942.....	35.2	19.8	35.6	25.5	1.53	272	18.7	987	137	1,023	136.2
1943.....	52.1	16.6	29.6	21.9	1.43	254	18.1	870	140	965	124.1
1944.....	38.0	18.1	29.8	23.0	1.41	294	18.3	791	131	1,117	132.7
1945.....	33.1	17.3	37.3	25.9	1.53	250	17.6	864	151	1,106	130.2
Prospective 1946 <sup>2</sup> ..	33.0	16.0	33.5	23.5	1.42	266	18.6	875	140	1,080	129.1

<sup>1</sup> Crops included in the average, in addition to the 10 listed in the table, are sorghum grain, rye, flaxseed, rice, wild hay, peanuts, sweetpotatoes, sugar beets, apples, 4 citrus fruits (oranges, tangerines, grapefruit and lemons) as a group; and 6 other fruits (peaches, pears, grapes, plums, prunes, and apricots) as a group.

<sup>2</sup> Indications in January 1946. Actual yields can be expected to be higher or lower to the extent that subsequent weather is more favorable or less favorable than average.

average about 12 percent above last year and about 55 percent higher than the base years of 1923-32.

Combining these yields in proportion to the relative importance of the crops during the 1923-32 predrought period, aggregate 1946 yields are likely to average well over a fourth higher than during that period. Looking at the component parts of such an increase, about 37 percent of the total expected gain results from the relatively high

yield of cotton, and 27 percent from improvement in corn. Increased yields of small grains and hay are expected to account for about 13 percent of the total gain, potatoes 4 percent, tobacco 5 percent and fruits about 12 percent. Despite a few adverse factors, present prospects appear favorable for another good crop year in 1946.

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## Farm Price Supports for 1946

THE year 1946 is the sixth year of the farm price-support program. First begun in 1941, the program has served the dual purpose of encouraging the production of crops and livestock necessary to win the war and, at the same time, of protecting farmers against price declines.

In order to assure needed production, many commodities have been supported at levels substantially above 90 percent of parity, the minimum required by law for those commodities for which price supports are mandatory. And in 1946 supports for some commodities are continued above the 90 percent level in order to assure production to meet prospective needs. In exceptional cases, such as sugar beets and sugarcane, announced support prices in 1946 are higher than in 1945.

For a number of other commodities, requirements have been reduced as a result of the end of the war. The role of price supports as a means of assuring needed production of these commodities is of less significance in 1946 than previously, and the minimum level of support required by law has been the chief consideration in determining the level of price support.

Shortly after the inauguration of the price support program in 1941, Congress passed specific legislation defining the minimum levels and the

period of time for which price supports must be continued in order to protect farmers from a possible sudden drop in prices resulting from the end of the war.

Under this legislation, the Government is required to support the prices of basic commodities at 90 percent of parity (92½ percent in the case of cotton) unless marketing quotas have been voted upon and disapproved. Prices of nonbasic commodities, which farmers were publicly requested to expand in production during the war, must be supported at not less than 90 percent of parity until the expiration of a 2-year period beginning with the first day of January following the official declaration of the end of hostilities. Since no declaration has yet been made, farmers are assured these supports for at least the next 3 years.

The price support legislation also declares it to be the policy of Congress that lending and purchase operations be carried on by the Government so as to bring the prices and income of producers of nonbasic commodities, not covered by public announcement, into a fair parity relationship with other commodities, to the extent funds are available, and after taking into account the ability of producers to bring supplies into line with demand.

For price support purposes, therefore, commodities may conveniently be divided into three groups—basic commodities, nonbasic commodities covered by public announcement, and other nonbasic commodities.

The basic commodities include corn, wheat, cotton, peanuts for nuts, rice, and tobacco. These commodities will be supported during 1946 as in 1945 by means of loans at 90 percent of parity (92½ percent in the case of cotton) as required by law.

The nonbasic commodities covered by public announcement, and which, therefore, must be supported at not less than 90 percent of parity or the comparable price, include hogs, eggs, butterfat, milk, chickens (excluding chickens weighing 3½ pounds or less and all broilers), turkeys, specified varieties of dry edible beans and peas, soybeans for oil, flaxseed for oil, peanuts for oil, potatoes, cured sweet potatoes, and American-Egyptian cotton. Some of these commodities will continue to be supported at levels above 90 percent of parity during 1946 in order to assure the production required to meet prospective needs. For others, including hogs, eggs, and potatoes, price supports designed to assure producers 90 percent of parity, the minimum required by law, have been announced. In the case of hogs, it is expected that market prices which producers will be able to obtain under existing ceilings will be higher than the announced support level.

Dry edible peas will be supported in 1946 at 90 percent of the comparable price as of July 1, 1946. Last year, supports were somewhat above 90 percent of the comparable price.

By mid-February no announcement had been made with respect to support prices for milk and butterfat. Market prices in 1945 were substantially above 90 percent of parity and there is little likelihood that market prices in 1946 will drop as low as 90 percent of parity. In addition, dairy farmers received production payments in 1945 at rates

which averaged about 13 cents a pound on butterfat sold as farm separated cream and about 55 cents a hundredweight on whole milk sales. These payments are scheduled to continue through June 1946. If they are terminated or reduced after June 30, price ceilings will be adjusted upward by approximately a corresponding amount so as to maintain returns to farmers at about the same level as in 1945.

Likewise, by mid-February no announcement of support prices for 1946 had been made for chickens, turkeys, dry edible beans, cured sweetpotatoes, or American-Egyptian cotton—all of which must be supported at not less than 90 percent of parity or the comparable price. In 1945 prices of chickens and turkeys were supported at 90 percent of parity. Cured sweetpotatoes and American-Egyptian cotton were supported by means of loans in 1945 at prices calculated to reflect 90 percent of parity to producers. Price supports on dry edible beans were above parity in 1945.

The commodities in the third group—the nonbasic commodities not covered by public announcement—for which price supports were in operation in 1945 included designated vegetables for canning, designated fruits for canning and drying, wool, naval stores, sugar beets and sugarcane, rye, barley, grain sorghums, designated winter cover crop seeds, and certain hay and pasture seeds.

Price supports on these commodities are not mandatory and some may be dropped from the 1946 program. The only ones for which price supports have been announced so far are sugar beets and sugarcane and winter cover crop seeds. Although no announcement has been made with respect to the price support for rye, barley, and grain sorghums, it is likely these grains will again be supported in 1946 by means of loans based upon the loan rate for corn and relative feeding values.

Prices of vegetables for canning will not be supported in 1946. The area average prices to be used by OPA as the raw material cost basis in computing canners' ceiling prices on sweet corn, green peas and tomatoes are the same as last year. No prices have been designated for snap beans as it is contemplated that the 1946 pack will be exempted from price ceilings.

The methods to be used in supporting prices and the levels of support for the commodities for which 1946 supports have been announced follow.

**Hogs.**—The present price support of \$13 per hundredweight at Chicago, with no seasonal variation, continues in effect until September 30, 1946. During the market year beginning October 1, 1946, hog prices will be supported at an average support price for the year of \$12 per hundredweight, Chicago basis. The support varies by weeks through the season from a low of \$10.75 in December 1946 to a high of \$13.25 in September 1947. This is the first time that seasonal variations have been applied to support prices for hogs. The new support prices apply to hogs bought by federally inspected slaughterers throughout the United States, based on geographic differentials, above and below the average Chicago support price.

**Eggs.**—Egg prices will be supported through Government purchases of dried, frozen, and graded shell eggs at prices designed to reflect a United States average farm price of 29 cents a dozen for edible eggs during the spring season of flush production. For the Midwest, where prices historically average lower, the support program is intended to reflect an average farm price of 27 cents a dozen.

The support program will stress the purchase of dried whole eggs as the principal method of price support operations. Vendors will be required to certify that producers have received not less than the announced support prices of all eggs purchased from them by the Government. Pur-

chases of graded shell eggs will be limited so far as possible to those areas in which drying and freezing capacity is not sufficient to take care of local surpluses and where temporary surpluses threaten to cause prices to decline below support levels.

**Sugar beets.**—Growers of sugar beets are guaranteed a national average return, including Sugar Act payments, of not less than \$13.50 per ton of beets. This compares with \$12.50 in 1945. Payments will be made to growers by means of price supporting contracts with processors.

**Sugarcane.**—Growers of sugarcane for sugar in Louisiana, Florida, Puerto Rico, Virgin Islands, and Hawaii will receive \$2.10 per ton of average sugarcane, the payment in each producing area to be graduated upward or downward in accordance with the ratio of sugar recovered from the deliveries of the individual producer to sugar recovered from all deliveries in each area. Payment in the case of Louisiana growers will be equivalent to \$2.04 per ton of standard sugarcane and compares with \$1.60 per ton paid in Louisiana and Florida in 1945. The payments will be reduced to the extent of any increase in market prices. Details of the program, which will be carried out by the Commodity Credit Corporation, are to be announced.

**Soybeans.**—Prices will be supported for soybeans at \$2.04 a bushel, the same as the prices for last year, for the basic grades delivered to country elevators or other normal delivery points. Details of the exact method of price supports are to be announced in the near future.

**Flaxseed.**—Returns to growers from the flaxseed crop harvested in 1946 will be supported by acreage payments or otherwise at an average level equivalent to \$3.60 a bushel, Minneapolis basis. The exact method of price support will be determined and announced before the new crop flax is



marketed. In 1945, the support price of flaxseed was \$3 per bushel, Minneapolis basis, and was supplemented by production payments of \$5 per acre to growers participating in the goals program.

**Potatoes.**—Potatoes will be supported at levels calculated to assure producers 90 percent of parity by means of purchases of early and intermediate potatoes and loans on late potatoes. The program differs from that in operation in 1945 in two major respects. First, there is no advance announcement of support prices for grades below U. S. No. 1 at fixed amounts or at fixed percentages of the applicable prices for U. S. No. 1 grade. Instead, prices of lower grades exclusive of culls, will be supported at such times, in such areas, by such means, and at such prices as will be necessary to carry out the Government's support obligations. Eligibility for support of U. S. No. 1 potatoes may also be made contingent upon meeting prescribed conditions governing disposition of grades lower than U. S. No. 1. The second major change from the 1945 support program is that the announced support prices are base prices at a stage of distribution described as "in bulk loaded on truck at farmer's gate." Formerly the support prices were at the f. o. b. level. The actual price to be received by any grower participating in the price support operation will be the appropriate base price adjusted for the value of the marketing services actually performed. Announced support prices for 1946 reflect

to growers approximately 20 cents a hundredweight less than 1945 support prices after deducting marketing charges. Under the 1945 program, grower prices averaged 137 percent of parity January to August, inclusive, and 104 percent of parity September to December, inclusive.

**Peanuts.**—Peanuts grown in 1946 will be supported at prices calculated to reflect 90 percent of parity as of July 15, 1946, by means of purchases and loans. The specific level of price support will be announced after the July parity has been determined. Purchases under the program will be made until July 30, 1947, and loans will be available until January 31, 1947.

**Winter cover crop seeds.**—Winter cover crop seeds produced in 1946 will be supported through a purchase and loan program. Purchases from farmers of recleaned bagged seed which is fumigated when necessary will be made on the basis of the following prices per pound of top quality seed: Hairy vetch, 12 cents; Willamette vetch, 6 cents; crimson clover, 11.5 cents; and common ryegrass, 7.5 cents.

Nonrecourse loans will be made available at the rates per pound indicated for the following seeds of top quality: Austrian winter peas, 3.5 cents; rough peas, 5 cents; and blue lupine, 5 cents. Discounts are provided for seeds which fail to meet specifications.

IRWIN R. HEDGES  
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## Farm Machinery Prospects

**W**ITH farmers called upon for another year of top production, one of the important factors affecting their spring planting decisions will be the availability of farm machinery and other farm equipment. Faced with

another year of a tight labor supply along with overused, and in some cases worn out, farm machinery, farmers have a 1946 goal asking for roughly 10 million more acres to be planted or grown than in 1945. This goal

looks toward a production, as during the war, of about a third more than the 1935-39 average.

To meet these goals many farmers will need new machinery or replacements, while many others would like to obtain some even though their present equipment is not exactly in critical condition. In general, farmers are in a financial position that would permit them to purchase equipment if it were obtainable, not only to satisfy acute needs but also to embark on a long range farm equipment replacement program. If new machinery were available, shortages of farm labor would stimulate further mechanization this year and thus create more need or desire for farm equipment. Veterans are being given priority in farm machinery purchases. All these influences exert considerable pressure on the supply of farm equipment available for distribution.

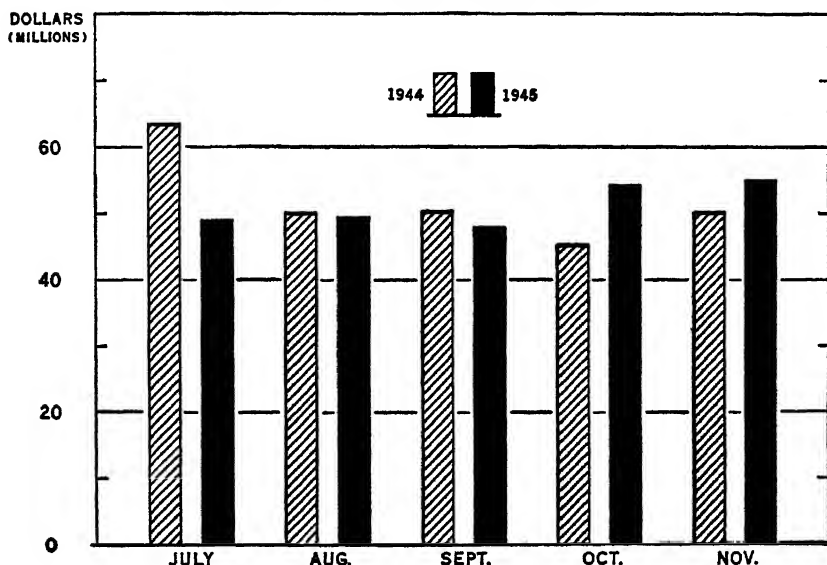
Even though quota restrictions on farm machinery production were removed last August, manufacturers have encountered many problems since

then which have retarded capacity production. Manpower and material difficulties have been critical. Shut-downs because of industrial unrest have already cost considerable production. Suppliers of raw materials and component parts have also had labor problems which have retarded the manufacture of farm machinery. Despite these obstacles, production in November and December was above that of the preceding two months. In January, however, production was further retarded by additional shut-downs.

In view of all the conditions affecting farm machinery manufacture and distribution, there appears little likelihood that farmers this year will be able to obtain all the machinery they will wish to buy.

Total production reported by 300 manufacturers representing more than 90 percent of the industry for the 5-month period July to December 1945 was less than for the comparable period of 1944. July, August, and September production of 1945 re-

## PRODUCTION OF FARM MACHINERY, JULY-NOVEMBER, 1944 AND 1945 COMPARED



mained fairly constant at approximately \$48,000,000 per month, while more favorable conditions during October and November brought increases to \$54,169,000 and \$54,971,000, respectively. Over-all production during these latter two months showed a modest increase above the corresponding months of 1944.

Repairs, haying machinery, planting, seeding, and fertilizing equipment, and cultivators and weederes were the classifications showing the largest dollar volume decreases over the total five-month period, while attachments, irrigation equipment, and domestic water systems reflected substantial increases. In the table is a comparison of the classifications of farm machinery production for corresponding periods for 1944 and 1945, in dollar volume.

It is expected that the critical materials and manpower problems of the farm machinery industry will become easier in the next few months. This will result in larger production, month by month, but the pent-up need and desire for new equipment will probably far overshadow this increase for sometime to come.

Planting, seeding and fertilizing equipment, tractors, plows and listers, as well as other spring equipment, will be extremely short for the next few months. It is expected that haying, harvesting, and other equipment for

## Farm Machinery Production, July through November, 1944 and 1945<sup>1</sup>

[Dollar Volume]

	1944	1945
Tractors for farm use.....	\$84, 501, 915	\$84, 450, 685
Tillage, seeding, fertilizing equipment.....	17, 758, 289	17, 476, 226
Cultivating, weeding, spraying equipment.....	8, 577, 042	8, 835, 611
Harvesting, haying, market preparation equipment.....	34, 905, 905	32, 176, 197
Dairy, poultry, barn equipment, farm elevators.....	14, 920, 677	18, 263, 139
Wagons, nonmotor trucks, and gear.....	1, 431, 771	1, 626, 325
Water systems, pumps, irrigation equipment.....	13, 652, 272	16, 499, 905
Attachments, miscellaneous equipment.....	17, 164, 051	22, 116, 391
Repair parts.....	83, 787, 278	72, 711, 459
Total.....	256, 682, 200	252, 156, 038

<sup>1</sup> As reported by 300 manufacturers representing 90 percent of total production.

later summer use will be coming off the production lines in much larger volume than in 1944, although this volume will not be sufficient to materially satisfy the demand for these machines. Therefore it is advisable that farmers survey their needs for 1946 early and carefully plan needed repairs and reconditioning to extend the life of their equipment until production becomes large enough to provide a balance between supply and demand.

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## Farm Labor Problems and Programs

AFTER 4 war years of record production, American farmers are again being called on for another year of top production—and in the face of a continued tight farm labor supply. World-wide needs for the product of the soil of this Nation, together with the high level of demand by American civilians and armed forces, necessi-

tated the setting of agricultural goals for 1946 looking toward a production a third above the 1935-39 average.

In the 5 years since January 1940, shifts from agricultural to non-agricultural employment, and enlistments and inductions of farm people into the armed forces have resulted in a loss of slightly more than 5 million persons

from agriculture—a net decrease of 16 percent in the farm population. And, despite the relaxation of manpower controls along with cutbacks in industry and releases from the armed forces, no significant increase in the farm labor force is in prospect for some months to come.

### **Many Adverse Factors**

The chief factors contributing to the slow increase in the farm labor force appear to be: (1) reluctance of veterans and war workers to accept farm employment because of agricultural job insecurity, working conditions, and wage differentials between farm and non-farm work; (2) savings and unemployment compensation to tide workers over a rather extended period with the hopes of securing industrial employment as reconversion progresses (if strikes are not protracted too long); (3) lack of adequate housing, sanitation, educational facilities, and other services on farms; (4) retirement from the farm labor force of older people, return of large number of youths to school, and return of many housewives to homemaking.

However, the farm labor force is not expected to decline below that of 1945 as present trends indicate that veterans and war workers returning to farms will offset the number of older persons and others who are retiring from the work force. But present signs point to a tight labor market for a good many months to come, and possibly for a few years. The experiences after the first World War further support this belief. As late as August of 1920, nearly 2 years after the Armistice, the Department of Labor in analyzing the shortage of farm labor at that time, due in part to the reluctance of veterans to return to farms, pointed out the desirability of continuing the importation of Mexican nationals to help with harvest operations.

All facts about farm labor needs and supplies for 1946 point to the necessity of more intensive recruitment of local

labor than in 1945, by the State and County Extension Service as well as by other agencies. And, where necessary, interstate and foreign workers will be employed to supplement local labor supplies. In 1945 more than 234,000 domestic farm laborers were placed in farm jobs by the Extension Services, and thousands of others, stimulated by press and radio appeals, made their own arrangements to work for farmers last year. In addition, nearly 120,000 foreign workers were utilized by farmers last year in 40 States. It is interesting to note that of the 22 million man-days of work available to these foreign workers, only 10 percent of the days were lost because of unfavorable weather, illness of the workers, or for other reasons.

To help effectuate the full employment concept, the Secretary of Agriculture and many other farm leaders, in testifying recently at congressional hearings, urged the greatest possible utilization of American workers in agriculture. Thus the Department of Agriculture in 1946 plans to intensify past recruitment programs by assisting veterans and displaced war workers to find employment on farms, and, by mobilizing women, youth, and others, to assist the regular farm labor force on a full or part-time basis. In addition, more effort will be directed toward aiding farmers and workers to obtain greater output per worker.

### **Mobile Task Forces**

Where these programs fail to provide the necessary American workers, the Department stands ready to provide farmers with foreign workers. Plans are ready to recruit, transport, provide health services, and assist in housing and feeding slightly fewer foreign workers in 1946 than in 1945, to meet farm labor requirements where the need cannot be met from any other source within the United States. Foreign workers will be utilized as mobile task forces to be rapidly shifted from various crop areas to assist in

planting, cultivating, and harvesting operations as needed. Because these workers will be utilized as mobile task forces, allocations to States must of necessity be flexible and at all times subject to the critical labor needs of specific areas. In addition, the labor

camps operated by the Department, for housing foreign, interstate, or migratory agricultural workers, will help facilitate the movement of seasonal workers.

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## Seed Supplies for 1946 Crops

**S**EED supplies are generally adequate for growing the crops called for in 1946 goals but for the best returns it may become necessary to make some careful selections and substitutions. For example, farmers in some areas may find it impossible to get the alfalfa or clover seed they need. But in general larger supplies of improved seeds of many kinds are available and these should be used to get the highest yield.

In the transition from a tremendous war output of intertilled crops to a long time program of balanced production, agriculture is faced with inadequate supplies of legume seeds. Both in this country and abroad, the demand is far in excess of the current supply, and it therefore, becomes necessary to make it go as far as possible. This means more effective use of seed by better preparation of the seed bed and lighter seedings or use of mixtures. Finally, it means substitution of other crops until a large supply of legume seeds is available.

### **Alfalfa Seed Supplies Short**

Alfalfa seed adapted to conditions in the Northern States is particularly short of requirements this year. The 1945 alfalfa seed crop was about the same as in 1944 and only 3 percent below the 10-year average, but the crop in the Northern States was 17 percent below that of 1944 and 27 percent below the 1934-43 average. Considering the fact that many farmers would like to increase their alfalfa

acreage this year, it becomes evident that the supply of alfalfa seed must be stretched by every means possible.

Many farmers get good stands of alfalfa with only half as much seed as some of their neighbors use because proper preparation of the land is such an important item. After all there are about 220,000 alfalfa seeds per pound and only 43,560 square feet per acre so each pound of seed per acre means five seeds per square foot. Lime and phosphate, together with inoculation, a firm seed bed and proper seed coverage become most important this year. The seed supply will go farther if more of the alfalfa is seeded in a mixture with brome grass, a practice which has demonstrated its value in many States.

Cooperation on the part of farmers to make the supply of adapted seed go as far as possible is far more desirable than the use of unadapted alfalfa seed. As seed supplies of the wilt-resistant strains are increased, there will be renewed interest in growing more alfalfa.

### **Red Clover Seed Demand Strong**

Red clover continues as the principal legume on farms in the Corn Belt and in many other Northern States. As more farmers have put lime and phosphate on their land they have found that red clover could be grown successfully again. This explains in part why there is renewed interest in red clover at this time and

why many farmers are using clover in place of alfalfa. The supply of red clover seed is about 8 percent less than a year ago although about 40 percent larger than the 1934-43 average. This is not as much seed as could be used this year but it will enable farmers to seed a large acreage to red clover.

As with alfalfa, there is need to make the supply go as far as possible by proper preparation of the seed bed and prudent use of seed. These are desirable practices at any time but they achieve a most significant purpose at this time when it is so necessary for farmers to develop their farms into efficient operating units. Efficient production is associated with high productivity and legumes are basic materials in developing it on the average farm. Efficient and abundant production is the way to better living and red clover will contribute much to this in the years ahead.

Alsike clover does not comprise a large acreage in comparison with alfalfa or red clover but it is important on many farms where soil conditions give it an advantage over other hay crops. The supply of seed is about a fourth more than last year, but about 10 percent below the 5-year average. This will enable farmers to seed a considerable acreage to alsike clover but again the demand exceeds the supply and there is need for attention to the effective use of this seed.

Sweetclover seedings during the past five years were far short of normal. As farmers make their adjustments to a peacetime program, they will use more sweetclover for pasture and hay. The present supply of seed is sufficient to permit some expansion in the sweet-clover acreage but the total seed supply is only about two-thirds as much as was used in prewar years.

Lespedeza seed supplies are adequate so farmers can expand their acreage where this crop is adapted. Pasture and hay production in many

States is dependent upon adequate supplies of this seed.

### Grass Seed Supplies Adequate

Grass seed supplies are adequate for all crops, except Kentucky bluegrass, so that farmers can expand their hay and pasture acreage or improve the pasture acreage on their farms or ranches. The 1945 harvest of some grass seeds was much smaller than in 1944 but the carry-over of seed is such as to make the total supply sufficient to meet the need for these seeds. Brome grass is gaining in importance in mixture with alfalfa as a hay and pasture crop in the Corn Belt and Lake States. There is every reason to expect that this mixture will become more popular as more farmers become acquainted with its advantages. The improved varieties of brome grass are especially well suited to use in the alfalfa-brome mixtures. Farmers have found that grasses enable the farm operator to use his land, his labor, and his equipment effectively and therefore the farmer who wants efficient production will give attention to the use of these crops. For summer pasture, a field of Sudan grass is usually a way to get more feed and is an effective measure towards achieving efficient production.

### Grain, Vegetable Seeds Plentiful

Field crops such as corn, small grain, the oil seeds and the other major crops do not present any problem so far as the total supply of seed is concerned but the farmer who must meet competition and who must make his living at farming needs the improved varieties of these crops. In most States, hybrid varieties of corn have been developed which are adapted to local conditions and yield one-quarter more than the old varieties. Because of frost damage, there is a short supply of good seed in northern areas. In some States, the new varieties of wheat, barley and oats, far outyield the old varieties and a farmer can hardly afford

to do without the new seed. New varieties of flax and soybeans have greatly increased the yield of oil per acre and made possible the profitable production of these crops in areas where they could not compete but for these added returns.

Vegetable seed supplies are plentiful except for some varieties of a few kinds and there are suitable substitutions so gardeners can grow just about whatever vegetables they like this year. Many new and improved varieties are available which will enable

the growers to provide the best crop of vegetables that was ever harvested.

The 1945 output of small vegetable seeds, which includes all kinds but garden beans, peas and sweet corn, is reported to be 41 percent above average though 35 percent smaller than in 1944. Production of certified seed potatoes in 1945 was over 33 million bushels, an all-time record.

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## Food Supplies During the War

CIVILIAN food consumption per person in the United States increased considerably during the war, despite the necessity of supplying huge quantities of food to our armed forces and allies. This increase was made possible by the Nation's large expansion of food production. The volume of food production for sale and farm home consumption increased steadily to a new record in 1944 of 38 percent above prewar. Expansion of production occurred in the face of a decrease in the farm labor force and was aided by unusually favorable weather throughout most of the country. The greatest increases in food production were in livestock products, wheat, and truck crops.

During the prewar years 1935-39, about 97 percent of each year's supply of food was consumed domestically, and about 3 percent was exported. The percentage of the total food supplies consumed by civilians during the war declined to about 80 percent. In 1942, the first full year of our participation in the war, about 7 per-

cent of the available food supply went to the armed forces, and another 6 percent was exported, principally under lend-lease. Government stocks of food were built up both in 1942 and 1943. For 1943, military takings had increased to 12 percent and exports to 8 percent. During 1944 and 1945, about 13 to 14 percent went to the armed forces and 6 to 7 percent to export. In these years, the Government stocks which had been built up in 1942 and 1943 were considerably depleted and were quite small at the beginning of 1946. From the beginning of 1945 until the end of the war, the armed forces were taking almost one-fifth of the total food supply and other Government purchases were still large. With the end of the war, however, military cut-backs changed the whole food supply picture and permitted immediate increases in the civilian supplies of many foods, particularly in the last quarter of 1945.

Because of the increase in total food supplies by 1944, they were about 37 percent above prewar—the decreasing

share of the total supply going to civilians did not result in a lowering of the average per capita consumption of food by civilians. In fact, on a per capita basis, over-all civilian food consumption averaged well above the 1935-39 level throughout the war. The index of civilian per capita food consumption, in which retail prices in 1935-39 are used as constant weights to combine the various foods, was as follows:

1935-39----	100	1943	106
1941-----	108	1944	111
1942-----	107	1945	110

Prior to VJ-day, civilian per capita consumption for the year 1945 was expected to be only 5 percent above prewar. After the end of the war, civilian supplies of many foods increased markedly, permitting a much higher level of consumption in the last 3 or 4 months of the year. As a result, the average rate of consumption per capita for the year 1945 is now estimated at 10 percent above prewar.

At least in the early months of 1946, supplies of some foods will continue to fall short of total demand at present prices. However, the total amount of food available to civilians in 1946 will be considerably greater than in 1945, principally because of cut-backs in military procurement. Even with increases in the civilian population resulting from the demobilization of armed forces, average food consumption in 1946 may exceed the 1944 record. Military food requirements in 1946 appear to be only one-fourth to one-third of the 1945 takings. Exports and foreign shipments of food in 1946 will continue large, accounting for perhaps 7 or 8 percent of the total disappearance of food in 1946, compared with 3 percent in 1935-39.

The 1946 prospects for per capita food consumption in the United States at least 11 percent above prewar is in

sharp contrast with conditions in other parts of the world where per capita food supplies average about 12 percent below prewar. The nutritive value of the 1946 per capita food supply in the United States is expected to be about the same as in 1945, a level considerably higher in all nutrients than in prewar years. In 1946 an average of about 3,360 calories is expected to be available per person per day, compared with 3,250 in 1935-39. This will provide food energy in excess of any recognized standard requirement for the average of the whole civilian population, though some groups will have considerably less than the average. The National Research Council has recommended daily allowances over 3,000 calories only for very active men and for boys from 13 to 20 years of age. A rough average requirement for the United States population is 2,800 calories, including moderate kitchen waste. Thus part of the margin between this requirement and the 3,360 calorie supply available is lost through excessive kitchen and table waste. The effect of the recently announced wheat conservation program will slightly enhance the protein, iron and B-vitamin content of the average diet.

In most of Europe the daily calories available for the average person are far below the 3,360 calorie average in the United States. In late 1945 less than 1,900 calories per person per day were available in the following countries: Spain, Italy, Poland, Hungary, Rumania, Yugoslavia, Germany, Austria, Finland and Portugal.

In the following countries 2,100 to 2,500 calories per person per day were available: Greece, France, Czechoslovakia, Switzerland, Norway, Netherlands, Luxemburg and Belgium.

Only three countries had over 2,800 calories available—Denmark, Sweden and United Kingdom.

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# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) <sup>1</sup>	Income of industrial workers (1935-39 = 100) <sup>2</sup>	1910-14 = 100				Index of prices received by farmers (August 1909-July 1914 = 100)			
			Whole-sale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities interest and taxes		Dairy products	Poult-ry and eggs	Meat ani-mals	All live-stock
1910-14 average.....	58	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	155	151	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	173	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	192	234	139	150	148	212	162	146	171	164
1945 average.....	203	-----	154	180	174	350	197	196	210	203
1945										
January.....	234	326	153	179	172	324	202	199	203	202
February.....	236	324	154	179	172	-----	200	183	209	201
March.....	233	322	154	180	173	-----	198	175	211	200
April.....	230	314	154	180	173	335	194	176	215	201
May.....	228	302	155	180	173	-----	192	179	217	202
June.....	220	301	155	180	173	340	191	189	216	203
July.....	211	287	155	180	173	362	192	197	215	205
August.....	187	260	154	180	173	-----	195	207	212	206
September.....	171	223	154	181	174	-----	197	201	207	203
October.....	163	217	153	182	175	355	199	204	202	202
November.....	168	221	153	182	175	-----	202	218	203	206
December.....	164	-----	156	183	176	-----	204	222	204	207
1946										
January.....	-----	-----	-----	184	177	347	203	197	206	204

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>1</sup>	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops			All crops
1910-14 average.....	100	101	102	96	93	99	-----	99	100	100
1915-19 average.....	193	164	157	168	187	125	-----	168	162	162
1924-25 average.....	147	126	192	189	149	148	143	160	151	108
1925-29 average.....	140	119	172	145	129	141	140	143	149	89
1930-34 average.....	70	76	119	74	72	94	106	86	90	66
1935-39 average.....	94	95	175	83	106	83	102	97	107	84
1940-44 average.....	123	119	246	131	159	183	172	143	154	103
1945 average.....	172	161	366	171	215	220	224	201	202	116
1945										
January.....	169	163	365	163	214	205	262	200	201	117
February.....	169	164	360	161	215	211	223	197	199	116
March.....	171	166	359	163	215	211	203	196	198	114
April.....	172	162	362	163	215	221	250	204	203	117
May.....	172	161	363	165	216	227	193	198	200	116
June.....	173	162	364	169	217	237	269	210	206	119
July.....	169	161	364	171	221	237	244	207	206	119
August.....	167	158	367	172	215	214	240	202	204	118
September.....	167	157	365	175	213	217	159	191	197	113
October.....	175	160	373	180	210	219	181	196	199	114
November.....	178	161	375	182	213	217	235	203	205	117
December.....	178	162	378	184	213	230	223	206	207	118
1946										
January.....	179	164	375	180	213	225	249	207	206	116

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income adjusted for seasonal variation, revised September 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

MARCH 1946

## *A Brief Summary of Economic Conditions*

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**M**ILLIONS of people throughout the world face starvation, partly the aftermath of war and partly the result of serious droughts in many food-producing areas. The United States is one of the few important food-producing countries to have escaped a drought last season, and, with ample larders, the world looks to this country to help alleviate the critical food shortage—in many countries much worse than during the war. To meet the crisis, by making more food available for shipment abroad, the President and other national leaders have asked for: (1) further increased agricultural production, (2) prevention of food waste, especially wheat, and fats and oils, and (3) substitution of plentiful foods. \* \* \* In Late February, the 1946 goals for wheat, corn, soybeans, grain sorghums, and dry peas were further increased about  $3\frac{1}{4}$  million acres, bringing the goals for cultivated crops to nearly 300 million acres, 18 million acres more than planted in 1945. Rural and urban people alike are asked to continue the victory garden program in 1946, and exceed last year's total of about 18 million gardens. \* \* \* Farmers, consumers, food processors, and food handlers are requested to conserve wheat—feeding wheat to livestock is restricted, wheat for alcohol is discontinued, and a slightly higher extraction rate for flour is required.

# National Economic Conditions in 1945

**S**TRONG domestic demand for agricultural products in 1945 exceeded available supplies. This was due chiefly to a continued high level of employment together with large non-agricultural income payments. Although the abrupt end of the war in August brought American business face to face with major problems of adjustment because of suddenly reduced Government purchases, both incomes and employment were better maintained than had been anticipated. During the last half of the year demands for food by the armed forces declined sharply and lend-lease shipments were terminated, but commercial exports continued large.

For the year 1945 as a whole, the gross national product and national income were about the same as in 1944. However, Government expenditures, as a contributor to gross national product, declined slightly more than consumer expenditures increased. The high level of consumer expenditures was made possible by small increases

in income payments and a decline in net savings of individuals. While overall money incomes were well maintained, the index of industrial production and income of industrial workers decreased by 14 percent and 16 percent respectively as compared with 1944. Increases in the level of both wholesale prices and consumer prices indicate that probably the general level of the physical volume of production was a little smaller in 1945 than in 1944.

The effect of the end of the war upon national economic conditions is somewhat obscured by comparing yearly figures. Industrial production, which had been declining slowly for some time, dropped nearly one-fourth between July and October. It rose slightly in November, but then declined again in December, mainly as a result of work stoppages in important automobile plants and holiday shut-downs in steel, textiles, paper, and mining. However, nonagricultural income payments decreased only

Economic Conditions in the United States—War and Prewar

	Unit	1935-39	1942	1943	1944	1945
Gross national product <sup>1</sup>	Bil. dollars	81.9	152.3	187.4	197.6	197.3
Government expenditures: <sup>1</sup>						
Total	do	13.7	62.7	93.5	97.1	83.0
War	do		50.3	81.3	83.7	69.0
Consumer expenditures <sup>1</sup>	do	58.8	82.0	91.3	98.5	104.9
National income <sup>1</sup>	do	65.4	122.2	149.4	160.7	161.0
Nonagricultural income payments <sup>1</sup>	do	61.1	104.5	127.7	141.1	144.1
Income of industrial workers <sup>1</sup>	do	10.8	26.1	34.8	35.6	29.9
Cash farm receipts <sup>1</sup>	do	8.0	15.3	19.3	19.8	20.5
Net savings of individuals <sup>1</sup>	do	5.5	28.6	33.3	38.9	34.9
Industrial production: <sup>2</sup>						
Total	1935-39=100	100.0	199.0	239.0	235.0	203
Munitions	1943=100		55.0	100.0	110.0	126.0
Wholesale prices: <sup>4</sup>						
All commodities	1926=100	80.6	98.8	103.1	104.0	105.8
All commodities except farm and food	1926=100	84.2	95.5	96.9	98.4	99.7
Farm products	1926=100	76.0	105.9	122.6	123.5	128.3
Food	1926=100	79.1	99.6	106.8	105.0	106.2
Cost of living: <sup>4</sup>						
Total	1935-39=100	100.0	116.5	123.6	125.5	128.4
Food	1935-39=100	100.0	123.9	138.0	136.1	139.1
Nonfood	1935-39=100	100.0	112.6	115.7	120.0	122.8
Foreign trade: <sup>1</sup>						
Exports:						
Total	Bil. dollars	2.9	8.0	12.8	14.2	9.6
Lend-lease	do		4.9	10.3	11.3	5.3
General imports	do	2.4	2.7	3.4	3.9	4.1

<sup>1</sup>Department of Commerce.

<sup>2</sup>Bureau of Agricultural Economics.

<sup>3</sup>Federal Reserve Board.

<sup>4</sup>Bureau of Labor Statistics.

<sup>5</sup>For month of September, 1945.

6 percent between July and September (after allowing for seasonal variation) and rose slightly in October and November. The strength shown by income payments in the latter part of the year was primarily the result of increases in total mustering-out payments by the military services and in unemployment compensation payments. Military and civilian pay rolls of the Federal Government and factory pay rolls decreased considerably, and more than offset increases in other sectors of the economy, particularly in the trade and service industries.

The increase in unemployment during the last 5 months of 1945 was comparatively small. According to the Bureau of the Census, the number of unemployed rose from 830,000 in August to 1,650,000 in September and

declined slightly in October. Unemployment rose in November and December, but totaled only 1,950,000 in the latter month. During this same period the total labor force declined by more than 5 million due in part to the withdrawal of women and under-age and over-age workers. Persons employed numbered 53,520,000 in August and 51,360,000 in December. The comparatively small changes in the total of those employed and unemployed (civilian labor force) during the last half of 1945 and the large increase in the number of persons not in the labor force indicate that a considerable number of men released from the armed services did not immediately seek employment.

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## Commodity Reviews

### FOOD SUPPLIES

**C**IVILIAN per capita food consumption in the United States in 1946 is expected to be at least as large and may even exceed any previous year, assuming, of course, that crops this year are no worse than average. This is in sharp contrast with the situation outside the United States with per capita world supplies for 1945-46 averaging about 12 percent below prewar levels.

Total food supplies of the United States in 1946 for domestic consumption, military use, and export are not expected to differ greatly from 1945. Despite some increase in exports to meet the critical needs of liberated areas, civilian consumption in the United States probably will be larger than last year. The proportion of the total food supply going to the armed services has been sharply reduced.

But civilian food supplies in the

Civilian Consumption Per Capita of Major Foods, 1935-39 Average, 1945 and Preliminary Forecast for 1946

Food group	1935-39 average	1945	1946 forecast
	Pounds	Pounds	Pounds
Red meats.....	125.6	131.5	150
Chicken and turkey meat.....	20.5	29.0	28.6
Eggs <sup>1</sup> .....	298	390	365
Fluid milk and cream.....	340	447	430
Butter.....	16.7	10.5	10.5
Lard.....	11	11.9	12.6
Margarine.....	2.3	3.4	2.7
Fresh fruits.....	138.5	148.5	148
Processed fruits.....	25.7	31.5	( <sup>2</sup> )
Fresh vegetables.....	235	270	247
Processed vegetables.....	36.7	53.8	( <sup>2</sup> )
White potatoes.....	130	130	( <sup>2</sup> )
Sweet potatoes.....	23.3	19.2	( <sup>2</sup> )
Dry beans and peas.....	9.3	7.9	( <sup>2</sup> )
Wheat flour.....	153.1	161.4	157
Corn products.....	5.7	40.7	36.5
Rice.....	5.7	5.4	5
Rye flour.....	2.2	2.6	2.3
Oatmeal.....	3.9	4.1	4.4
Sugar.....	96.5	73.2	( <sup>2</sup> )
Coffee.....	14	16.2	17
Tea.....	0.7	0.7	0.7
Cocoa.....	4.4	3.5	3.8

<sup>1</sup> Numbers, not pounds.

<sup>2</sup> Not available till April.

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1910-14 average	100	100	100
1915-19 average	162	180	106
1920-24 average	151	173	88
1925-29 average	149	168	89
1930-34 average	90	135	65
1935-39 average	107	128	84
1940-44 average	154	145	105
1945 average	202	174	116
1945			
February	199	172	116
March	198	173	114
April	203	178	117
May	200	173	116
June	206	173	119
July	208	173	119
August	204	173	118
September	197	174	113
October	199	175	114
November	205	175	117
December	207	176	118
1946			
January	206	177	116
February	207	178	116

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

aggregate will be hardly sufficient to satisfy total domestic demand. Supplies of some foods will be substantially less than many groups of consumers would be willing to purchase at current prices, reflecting in some instances the necessity of substantial exports to prevent starvation abroad. The new food conservation program may alter food consumption in the United States during the next few months, but the precise effects on the annual per capita rate of consumption could not be estimated in early March.

Most prominent among the foods that will be short throughout the year are sugar and butter. Civilian supplies of meat, canned fish, fats, and canned fruits are expected to be insufficient to satisfy consumer demand in full at present prices during a large part of the year. On the other hand, prospects are quite favorable for plentiful supplies of fresh and frozen fish, poultry products, dairy products

except butter, citrus fruit, canned fruit juices, fresh and processed vegetables, and potatoes. Despite the need for curtailing the use of wheat in the production of alcohol and beer and for increasing the wheat-flour extraction rate in order to meet export commitments, the consumption of wheat cereal products may continue higher than before the war although somewhat below 1945.

With the exception of lamb, mutton, veal, and perhaps fluid milk, fresh vegetables and cereal products, civilian per capita consumption of individual foods this year will be at least as large as for the year 1945. Among the foods for which consumption per person is expected to be higher than in 1945 are beef, pork, fish, evaporated milk, cheese, fluid cream, lard, processed fruits and vegetables, and potatoes. A little more sugar may be available than last year.

## WHEAT

WITH very heavy export requirements, it is expected that the carryover July 1, 1946, will be reduced to the lowest level since 1937. The 80 percent extraction rate, by lowering byproduct production of millfeeds and still maintaining high levels of flour production, will release about 20 million bushels for export. Any savings resulting from the campaign to reduce domestic wheat consumption will further increase the quantity for export. Wheat for alcohol has been discontinued for the rest of the present crop year.

The quantity of wheat available for export is of course dependent on free movement of farm stocks to market, as well as a sharp reduction in using wheat for feed which accounted for 175 million bushels in the last six months of 1945. The recent advance in price ceilings for wheat will encourage farmers to sell more freely and also effect some reduction in wheat feeding.

Of the 1,406 million bushels available for the 45-46 year, if 84 million

are used for seed, less than 520 million for food, 20 million for alcohol, 240 million or less for feed, and 400 million for export, the July 1 carryover will approximate 150 million. This compares with the 1932-41 average of 235 million, and the quarter-century low of 83 million in 1937. As of Jan. 1, stocks were 689 million bushels, of which farmers held 369 million.

The prospective world supply of wheat including flour for export, located in the four principal exporting countries, amount to about 900 million bushels. This is about 18 percent less than the total of world import requirements, placed at over 1,100 million bushels, but about double the average net exports from these countries in the 5 prewar years and an all-time record.

Of the total probable exports, it is expected that the distribution will be about as follows, in million bushels: United States 400, Canada 370, Argentina 90, and Australia 40. Sup-

plies from the Southern Hemisphere countries are below average because of smaller-than-average harvests this season (December 1945) and reduction or virtual elimination of carryover stocks following the previous year's severe drought. The new crop in Australia at 130 million bushels, however, is sharply above the 52 million bushels in 1944, but the production in Argentina, estimated at 150 million bushels, is the same as in 1944. Exports from Argentina have been adversely affected by the lack of adequate supplies of fuel and tires, necessary to transport wheat to shipping ports.

## FEED

**S**TOCKS of corn, oats, and barley on farms and at terminal markets on January 1, 1946, totaled 74.5 million tons, 2 percent less than on January 1, 1945. Corn stocks were the smallest for that date in 7 years, barley stocks were smaller than any year since 1938, but oat

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Feb. 15 1945	Jan. 15 1946	Feb. 15 1946	Parity price Feb. 15, 1946
	August 1909- July 1914	January 1935- December 1939				
Wheat (bushel).....dollars	0.884	0.837	1.47	1.54	1.55	1.57
Rice (bushel).....do	0.813	0.742	1.81	1.80	1.77	1.45
Corn (bushel).....do	0.642	0.691	1.05	1.10	1.11	1.14
Oats (bushel).....do	0.399	0.340	.733	.717	.731	.710
Hay (ton).....do	11.87	8.87	17.70	15.70	15.80	21.10
Cotton (pound).....cents	12.4	10.34	19.99	22.36	23.01	22.07
Soybeans (bushel).....dollars	10.96	0.954	2.10	2.09	2.11	*1.71
Peanuts (pound).....cents	4.8	3.55	8.14	8.37	8.43	8.54
Potatoes (bushel).....dollars	0.697	0.717	1.64	1.45	1.46	1.80
Apples (bushel).....do	0.96	0.90	2.53	3.53	3.75	1.71
Oranges on tree, per box.....do	1.81	1.11	2.25	2.12	2.12	2.10
Hogs (hundredweight).....do	7.27	8.38	14.00	14.10	14.20	12.90
Beef cattle (hundredweight).....do	6.42	6.56	11.60	11.80	12.60	9.65
Veal calves (hundredweight).....do	6.75	7.80	13.20	13.60	13.90	12.00
Lambs (hundredweight).....do	5.88	7.79	13.50	13.00	13.30	10.50
Butterfat (pound) <sup>1</sup> .....cents	26.3	29.1	60.8	60.7	60.8	*48.0
Milk, wholesale (100-pound) <sup>1</sup> .....dollars	1.60	1.81	13.29	13.37	13.33	*2.93
Chickens (pound).....cents	11.4	14.9	24.5	23.5	23.1	20.3
Eggs (dozen).....do	21.5	21.7	35.8	41.1	32.6	*35.6
Wool (pound).....do	18.3	23.8	40.2	40.1	40.6	32.6

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section 3 (b) Price Control Act

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

stocks were larger than on any other January 1 for which records are available. With the number of livestock on farms only slightly larger than a year earlier, January feed grain stocks per animal unit were only slightly smaller.

The very strong demand for feed grains and byproduct feeds that has persisted during the past few months continued unabated during February. Market supplies have been fairly large, but, with high returns from livestock, demand has far exceeded the available supplies. Prices have remained at ceiling levels. Competition for market supplies of all kinds of feed concentrates probably will continue intense through spring. Supplies of corn, particularly for processing, will be insufficient to meet all needs at least until new crop grain becomes available.

Emergency measures to be taken under the President's directive of early February to help meet world food needs may result in some easing in the demand for feed. But such a reduced demand probably will not be felt much before late spring. The most immediate effects will be less grain utilized in producing alcoholic beverages. Wheat feeding has been restricted. With a higher extraction rate in milling, the output of wheat millfeeds will be reduced. If hogs are marketed at lighter weights and cattle are marketed before attaining a high degree of finish the rate of feeding per unit of livestock output will be reduced slightly.

Demand for feed grain for processing probably will be very strong during the remainder of the current season. Requirements of livestock, however, probably will be somewhat lower by the second half of 1946, with fewer chickens and turkeys being raised than in 1945, and with some decrease in numbers of milk cows and other cattle on farms. There will be more hogs on farms than a year earlier but they probably will be marketed at lighter weights.

## DAIRY PRODUCTS

UNIT returns to dairy farmers during 1946 are to be maintained at the 1945 level, according to a recent announcement by the Stabilization Administrator. Such returns will be maintained by subsidy payments, or increases in price ceilings if subsidies are eliminated. This action was taken to encourage milk production. During 1945, subsidies accounted for somewhat more than one-seventh of the total cash income from dairy products.

Milk production in 1946 is expected to be about 3 percent smaller than the record 122.2 billion pounds produced in 1945. The number of milk cows on farms January 1, 1946, at 26.8 million head, was 3 percent below January 1, 1945. But production per cow may not show much change.

Over-all demand for dairy products at present prices will exceed supplies. Supplies of fluid milk and manufactured whole milk products (cheese, evaporated and condensed milk, and dried whole milk) may be sufficient during the year to meet most demands, but the demand-supply gap for butter will be wide all year. Production of ice cream, limited by sugar supplies, will not be sufficient to meet demand in full.

## POULTRY AND EGGS

DOMESTIC demand for eggs in 1946 is expected to be moderately less than in 1945, chiefly because supplies of meats are larger than last year. Exports also will be less. Prices received by farmers for eggs during the flush production season will be less than in the comparable season of 1945 and may be at or near support levels.

For price-support purposes only, the Department of Agriculture has announced that, until further notice, it will pay 99 cents to \$1.00 per pound for dried whole eggs, f. o. b. delivery point, and 26½ cents per pound for

frozen whole eggs. These prices are expected to reflect at least 90 percent of parity as required by law.

The number of hens and pullets on farms January 1, 1946 was 469 million, about the same as on the previous January 1. Hence, farm egg output during the first half of 1946 will be about the same as in corresponding period of 1945. However, farmer's intentions as of February 1 to purchase 14 percent less baby chicks this Spring than Spring 1945 will adversely affect egg production in the latter half of 1945.

Commercial broiler and turkey production because of decreased army procurement and tight feed supplies, will be less in 1946 than in 1945. As of January 1, farmers indicated a 5 percent decrease in purchase of turkey poults.

Chickens on farms January 1, 1946 totaled 525 million head, exceeded only by the January 1, 1944 record of 576 million, and slightly greater than on January 1, 1945. The 8.7 million head of turkeys on farms January 1, 1946 exceeded any previous year.

## FRUIT

**T**HE strawberry acreage for harvest in 1946, judging from early indications, may be about one-fifth larger than in 1945, but still well below pre-war acreages. With average weather, production probably would be much above the very low wartime level of about 5 million crates in 1944 and 1945. Considerable further recovery in production would be required, however, before the prewar level of about 10 million crates would be reached.

Although it is too early in the year to forecast with accuracy the supplies of other 1946 crop deciduous fruits, it is now expected that if average growing conditions prevail, supplies of apples from commercial areas may be about twice as large as from the short 1945 crop.

Plentiful supplies of fresh citrus

fruits will continue to be available this spring. Supplies of oranges and grapefruit from Florida, especially, will be larger than last spring. A record large canned pack of grapefruit juice is in prospect from the 1945-46 crop. In addition, large canned packs of orange juice and blended orange and grapefruit juice are now being processed. Practically all of this new pack will be available to civilians, in contrast to the case with the preceding pack of which about two-fifths was taken by the military, lend-lease, and commercial exports. Civilians once more are receiving canned grapefruit segments from a larger 1945-46 pack. Nearly all of the small wartime packs of such fruit were taken by the military. Although civilian supplies of all canned fruits this season are much larger than last season and near pre-war levels, they still are short of demand at ceiling prices.

Demand for fresh fruit continues strong this season, with prices generally at the high wartime levels of the past few seasons. Prices for apples, pears, and strawberries have been at ceilings this past winter. Prices for oranges generally have been at ceiling levels, but prices for grapefruit and lemons generally have been somewhat below ceilings. This price behavior of citrus has followed the usual seasonal pattern.

## VEGETABLES

**S**UPPLIES of commercial truck crops for fresh market this spring probably will be about as large as last spring, granted good growing weather. Preliminary reports on spring acreages, show a probable increase of about 8 percent over 1945 and 17 percent above average (1935-44). Particularly large percentage increases are indicated for late spring onions and for covered (hot-capped) acreages of cantaloupe and honeyball and honeydew melons. Spring production of shallots on the other hand, is estimated



to be not quite three-fourths as large as last year.

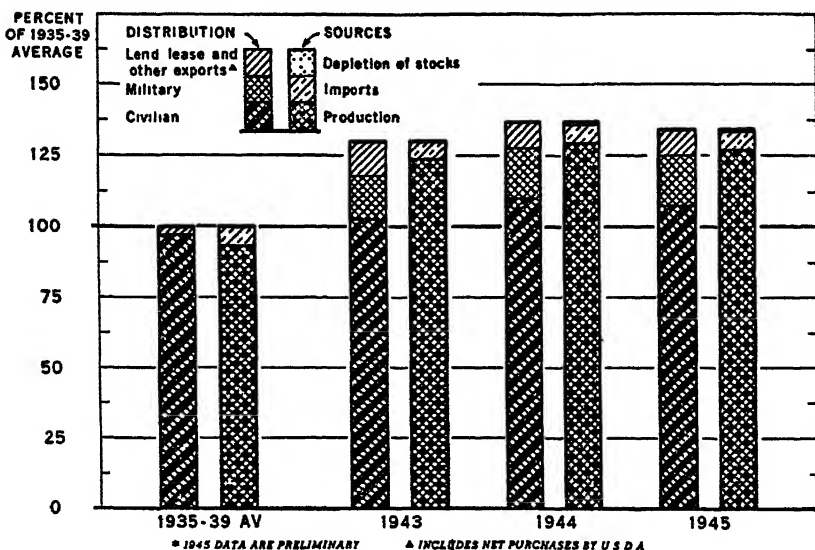
Demand for vegetables for processing this year is not expected to be as strong as last because of the major reduction in military requirements. Grower prices for vegetables for processing and processed vegetables will not be supported in 1946. It is expected, however, that considerably more than prewar quantities of vegetables will be processed and consumed in 1946.

Supplies of potatoes in terminal markets this spring should be generally adequate, although refrigerator car shortages may cause temporary maldistribution. The very active demand for potatoes for export may not be completely satisfied because of handi-

caps in loading and moving the potatoes to ports and loading on ships. Movement of seed potatoes, expected to reach a seasonal peak in March, will complicate the car problem for table stock potatoes. It is now a question whether the old crop potatoes can be moved to market and to export fast enough to get them largely out of the way by the time new crop potatoes become available in considerable volume. Plantings and intentions to plant indicated in early February that the total acreage in commercial early potatoes this year probably will be the same as last year.

The remaining stocks of sweetpotatoes are expected to be inadequate to meet demands at ceiling prices for the balance of the marketing season for the 1945 crop.

**TOTAL UNITED STATES FOOD DISAPPEARANCE: DISTRIBUTION AND SOURCES, 1935-39 AVERAGE, 1943, 1944, AND 1945\***



# Feed and Livestock During Four Decades

**F**EEED grain production during the war just ended exceeds any previous record, largely because of technological developments and unusually favorable weather, though the acreage was smaller than during World War I and the following two decades except for the 1935-39 period. The combined production of all livestock and products increased even more than the output of feed grains and hay did during World War II. The wartime increase in feed production of 30 percent for grains and 18 percent for hay—made possible the expansion in meat, dairy and poultry products by a third more than the 1935-39 average.

During World War II (1941-45) feed grain production averaged 15 million tons a year more than during World War I (1915-19), being larger in all regions of the country except the East. Of the four feed grains produced throughout the country, the proportion of corn was about 73 percent for each war period, oats dropped from 21 percent to 17 percent in the second period, while barley increased from 4 to 7 percent, and sorghums from 2 to 3 percent.

To appraise the future productive capacity of the Nation's farm plant, it is necessary to understand how so large an increase in the production of feed crops and livestock came about. To what extent were these increases the temporary result of emergency efforts? To what extent were they the result of permanent influences which may be expected to continue?

## Higher Yields Chief Development

A major part of the wartime increase in the production of feed crops is attributable to higher yields per acre in pounds or in nutritive value for each of the leading feed crops. Total cropland used for crops was increased

about 3 percent and in addition, a considerable acreage was shifted from small grains to corn or soybeans, each producing more feed per acre than oats. Nevertheless, additional feed thus produced was not so large as that resulting from increases in the yield per acre of these crops and hay.

## Hybrid Corn Now Widespread

Foremost among the factors, including weather, which increased yields per acre, was greatly increased use of hybrid seed corn. It is calculated that corn production in the United States in 1944 was about 400 million bushels greater than it would have been had open-pollinated seed been used on all the acreage planted. Improvements have been made in oats and soybean seed comparable to those in hybrid corn, and use of the improved varieties is spreading rapidly.

Expanded use of fertilizer on corn and oats has improved yields, as have more mechanical power and labor-saving machinery. Undoubtedly both corn and soybean yields were higher in the Corn Belt in the last four years because farmers had sufficient power to complete planting and cultivating promptly after the late spring rains.

The noteworthy contribution of the hay to larger feed supplies came about by the gradual shifting from grass hay to legume hay with its greater proportion of digestible proteins. This, together with the big increase in the production of oilseed cake and meal means that important progress has been made toward a better balancing of rations for livestock.

Aside from the important increases in the total production of feed crops, the most important factor in increasing the output of livestock products for market has been the shift from animal power to mechanical power since World War I. The decline in the total quantity of feed used for horses and mules on farms and in cities is equiva-

NOTE.—This summary is based largely on a more comprehensive report, *Feed Grains and Meat Animals in War and Peace*, prepared by Mr. Orlickman and recently issued by BAE.—Editor.

lent to the production of about 50 million acres of cropland and many million acres of pasture. This large quantity of feed is now available for production for market. The hay and pasture released in 1944, as compared with 1918, was enough to feed the equivalent of about 16.5 million head of cattle and calves.

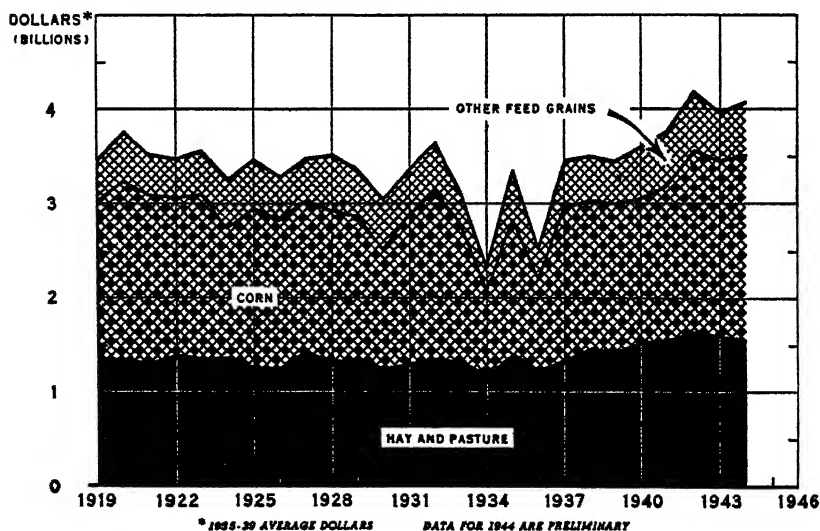
On the production side, increasing the supplies of feed for producing meat, dairy, and poultry products is progressive. It will persist when done by shifting from horse to mechanical power, by the use of hybrid corn and other new higher-yielding varieties of seed, by turning from grass to higher-yielding legume hays and pastures, and by increasing the use of fertilizer. Likewise an influence in the direction of a larger production of livestock will be the feeding of better balanced rations resulting from continuation of larger than prewar acreages of crops yielding protein meals as a byproduct. On the other hand, renewed soil conservation practices may mean some reduction in grain for hogs, but in-

creased forage supplies for cattle and sheep—with little or no reduction in total feed units. Another offsetting factor is the uncertainty of prolonged continuation of better-than-average growing weather for ranges, farm pastures, and feed crops.

For the United States as a whole, a postwar acreage of corn about the same as in 1940 (88-89 million planted acres) would permit (1) some restoration and maintenance of the productivity of the soil in the principal corn producing areas, and (2) desirable shifts in crop production in non-commercial areas. In a year or two many farmers, particularly among those in the Corn Belt and Lake States, are likely to return to a cropping system which includes more grasses or legumes and less corn and soybeans. On the other hand, further recovery from the drought setback in corn acreage in the Great Plains and Mountain States appears likely; yet the full size of the pre-drought acreage probably could not be maintained over a period of years.

## VOLUME OF FEED GRAIN, AND HAY AND PASTURE PRODUCTION, UNITED STATES, 1919-44

(PRODUCTION MEASURED IN 1935-39 AVERAGE DOLLARS)



Some of the Corn Belt acreage taken out of corn and soybeans in the next year or so would be used for growing oats. This would be encouraged by the recent development of new higher-yielding varieties. The acreages of both oats and barley probably will be increased in the northern Plains and Mountain States as a part of a program of more diversified farming. Better winter varieties of oats and barley for the South will contribute to further expansion in that region. Thus, there are indications that the future acreage of oats might be as much as 2 million acres more and of barley as much as 1 million more than the 1944 acreages. If the acreages mentioned for these three feed grains are planted, and about 8 million acres of sorghums are harvested for grain, the normal expectancy for total production of feed grains in future years would exceed the prewar level because higher yields per acre can be expected with average weather. Thus the total annual tonnage of feed grains would be about 110 million tons—11 million tons more than the average production in 1937-41.

#### Future Yields Above War Levels

And it is entirely possible to further increase feed grain yields above the record and near-record levels of the past four to five years. Recent studies indicate that in a prosperous agriculture it would pay farmers to use approved practices that might be expected to lift yields of corn and oats a fifth above wartime yields and to maintain the yields of barley and sorghums harvested for grain at about the war level, with normal growing weather. Full attainment of the possibilities for increases in yields on the future acreages mentioned would raise the total production of feed grains to 127 million tons—almost 8 million tons above the average wartime production from 1942 through 1944, each good feed production years.

If a reasonably high national income is not maintained and farm incomes are low, the influences tending toward increased yields would be considerably weakened. But so would the possibilities of downward adjustment in the acreage of corn. It is only necessary to recall the situation that prevailed after World War I and again during the period 1930-33 to anticipate how farmers would react to low prices. They would be likely to try to offset falling prices by maintaining the acreage of corn near the wartime peak. That would mean an annual production of feed grains of about 118 million tons, assuming current "probable" yields per acre.

Each additional ton of feed grain (when matched with the usual proportion of protein supplements and forage) would provide feed for producing about 1.4 additional composite units of livestock. Because the downward trend in the number of work animals is expected to continue, it is estimated that the increase in total production of livestock other than horses and mules that could be produced in 1950 with an addition of 11 million tons of feed grains would be nearly 21 million units.

Assuming the smaller grain output, plus other concentrates, about 118 million tons of concentrates would be available for feeding all classes of livestock and poultry, and that about 35 percent (the usual proportion) of this supply would be fed to hogs, the annual production of hogs for slaughter would be about 82 million head. By the same method of estimation, continuation of the current level of production of feed grains would provide feed for about 88 million head. But if production of feed grains should reach the potential of 127 million tons, and if the same allowances are made, the calculated production of hogs for slaughter is 94 million head. These numbers can be compared with an average slaughter of 57 million head in 1935-39 and the wartime record of 97 million head in 1944.

Considering the production prospect for cattle in different parts of the country, the feed supply in the immediate years ahead is likely to be ample for supporting all cattle numbers (beef and dairy) slightly higher than has ever been reached previously. And the annual slaughter of cattle and calves from this higher level of stocking might be expected to be around 30 million head—19 million head of cattle and 11 million head of calves.

Assuming a total United States population in 1950 of 144 million and a slaughter of 80 million head of cattle and calves, the per capita production of beef and veal would be about 70 pounds, which would be about the same as the per capita consumption in the middle 1920's, and in 1941 and 1942. The per capita production of pork and lard from a slaughter of 82 million hogs would be about 91 pounds; from 94 million hogs, about 104 pounds. A per capita production of 91 pounds of pork and lard (no allowance for exports) would be about 9 pounds more than the average per capita consumption in 1920-29, whereas a production of 104 pounds per capita would be about 22 pounds more than the average per capita consumption in 1920-29, and almost 13 pounds more than the average per capita civilian consumption in 1944.

After the pent-up demand of domestic consumers and foreign relief requirements have been met, satisfactory markets and prices for meat and other agricultural commodities can best be assured by a high level of domestic employment and national income. Calculations based on an analysis of past relationships indicate that if the national income in the postwar period is as low as 105 billion dollars, farmers could expect to find a domestic slaughter outlet at commensurate prices for only about 28 million head of cattle and calves and for 75 million head of hogs. On the other hand, if the national income could be maintained at a high level (150 billion dollars), farmers could expect to find a

domestic slaughter outlet at commensurate prices for about 30 million head of cattle and calves and 87 million head of hogs.

Pork and lard were the only meat-animal products for which the United States had any appreciable export outlet before the war. From 1935 to 1939 exports of pork averaged about 2 percent and of lard about 12 percent of the annual production. The prospects for an expansion of exports for these products are not very bright, since the European hog-producing countries may be expected to get back to normal production as soon as they obtain their usual supplies of feed. Canada has greatly expanded hog production during the war and hopes to continue to find an outlet for any surplus in Great Britain. Argentina, too, will be seeking a market in other countries for a part of its small, but increasing production. A recent analysis indicates that exports of 600 million pounds of lard and 340 million pounds of pork (about the same as in 1925-29) is as high as can be reasonably expected even under full employment, unless foreign countries also have an expanding economy.

A production of 94 million hogs is about the same as the estimated number for which farmers could expect to find domestic and foreign outlets, assuming a national income as high as 150 billion dollars. On the other hand, a production of 82 million hogs is 7 million more than domestic consumers would probably take at a price commensurate with a national income of 105 billion dollars. A production of 88 million is 13 million more. Obviously, corn-hog farmers have a big stake in full employment and a high national income, and in larger export outlets than they had before the war. Otherwise, both surpluses of either corn or pork products and low prices will almost certainly confront them in the years ahead.

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# Fruit Production Prospects for 1946

**H**OW much and what kinds of fruit the American public will eat next summer, fall, and winter will depend more than anything else on the incidence of spring frosts and weather at pollination time in the different fruit regions of the country. Although it is extremely hazardous to forecast 1946 fruit crops before this critical period has passed, an appraisal of trends in recent years will indicate the assumptions which seem most tenable for the pattern of the 1946 season.

## 1946 Output Tenth Above 1945

Late February conditions indicated that the total tonnage of all fruit produced in 1946 will be about 10 percent larger than in 1945. Assuming that growing conditions in 1946 will be about average in all sections of the country, aggregate deciduous fruit production should be from 5 to 10 percent larger than in 1945, but from 5 to 10 percent smaller than in 1944. Citrus fruit harvested and to be harvested in the calendar year 1946 may be at least one-tenth larger than the tonnage harvested in 1945.

The citrus increase is indicated because of a moderate increase in bearing surface in most citrus areas. Also the incidence of the October 1944 Florida hurricane resulted in smaller marketings of grapefruit and oranges from that State in the winter months a year ago in comparison with the winter just ended.

For apples in commercial areas, an about average crop, or nearly twice the small 1945 production, seems the most reasonable expectation for 1946. In the Eastern and Central States short apple crops are usually followed by average or above average crops. However, last year many orchards in this area had so little fruit some growers discontinued spraying which resulted in excessive scab and summer defoliation. This may tend to limit 1946 production in these orchards. Also,

the trend of bearing surface is downward and for the past several years the "alternate" year large crops have usually been smaller than the previous "alternate" year large crops. In the West where production is less variable from year to year about the same size crop as harvested in 1945 should be expected. For the other important deciduous fruits the assumption of average growing conditions in 1946 indicates percentage decreases in relation to 1945 about as follows: peaches 10 to 15; pears 5 to 10; grapes 5; prunes and plums combined 10 to 15; and an increase of about 25 percent for cherries.

In 1945 an unseasonably warm March in the Eastern and Central States advanced fruit buds and fruit bloomed from two to four weeks earlier than usual. The southern peach region had favorable weather at blooming time, with a record peach crop produced there. In the Northeastern and North Central regions low temperatures, rain and spring frosts killed large numbers of fruit blossoms and reduced pollination. Apples in this area, which includes the leading eastern fruit States of New York, Virginia, Pennsylvania and Michigan, were a near failure, the harvest being the smallest of record.

## Two-thirds of Crop From West

In the Western States where about two-thirds of the country's deciduous fruits are usually produced, the 1945 season was unusually favorable for peaches, pears and grapes, with record or near-record productions. On the other hand, apples were only a near-average crop—and this region produced two-thirds of the national crop last year. The West usually produces from one-third to two-fifths of the Nation's apple supply.

In addition to the all important spring weather factors, 1946 fruit yields will be influenced by the care

given orchards and the availability of spray materials, fertilizer, and machinery. Although many individual growers will find one or more of these factors limiting fruit production on their farms this year, it does not seem likely that any of these elements will seriously reduce total fruit production or the output of any fruit crop. Under the stimulus of relatively high prices during the war years most commercial orchards have been well cared for, fertilizer applications have been adequate, and per acre yields high except in years when spring frosts and poor pollination weather reduced the set of fruit.

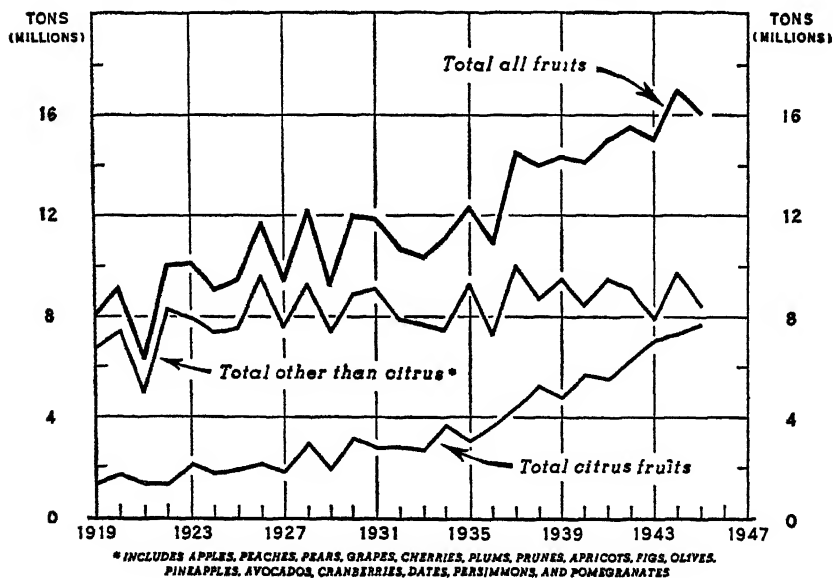
Wartime production of fruit exceeded production in any previous four-year period. Tonnage of all fruits in the four years 1942 to 1945 averaged about 16 million tons, 12 percent above the previous four years (1938-41) and 25 percent above the average production for the previous 10 years. Growers have produced and marketed these large crops under increasingly difficult conditions. Shortages have necessitated many make-shift operations and

the use of much unskilled labor, especially at harvest time. Farmers and their families have worked long hours. Pests and disease have been increasingly difficult to combat.

Production and marketing costs have increased sharply but so have fruit prices. The price index for all fruits combined for the four-year period from January 1942 to January 1946 was more than double the five-year (1935-39) average while the two-year period from January 1944 to January 1946 averaged  $2\frac{1}{4}$  times the five-year average. These relatively favorable prices and wartime demands for fruits have resulted in the marketing of much low quality fruit. In the years ahead fruit growers will need to concentrate more on producing quality fruits.

While the annual production of all fruits combined now average about twice the average production at the time of World War I, significant shifts in the relative production of the different kinds of fruits and in the relative importance of the fruit regions of the country have taken place during the

### FRUIT PRODUCTION: UNITED STATES, 1919-45



past quarter of a century. Deciduous fruits have increased about one-fourth and citrus about 6 times. Twenty-five years ago oranges, grapefruit, and lemons comprised about one-fifth of the total fruit production, whereas the proportion now is over two-fifths. Having been replaced by oranges as the leading fruit, apples now include only about 17 percent of all fruit tonnage in contrast to about 35 percent in the early 1920's. Orange production has increased from 13 percent of the aggregate tonnage in the early 1920's to 26 percent at present.

In the North Atlantic States—the oldest fruit area in the country—the level of production of apples and all fruit combined has declined about a fourth, with the production trend apparently still slightly downward. For the South Atlantic area, which includes Virginia, West Virginia and the important southern peach States except Arkansas, peach production has increased from a third to two-fifths and the apple crops are averaging about the same size as in the early 1920's. In the next few years, peach crops in

this area should average somewhat larger than during the war years and apples about the same size crops. Recent plantings of peach trees, especially in South Carolina, have increased bearing surface in this area. In the Central States, the level of apple production has declined about one-third in the last quarter of a century and the trend of production appears to be moderately downward.

In the West the level of deciduous fruit production is now about 50 percent greater than in the early 1920's. Grapes and peaches have increased from two-thirds to three-fourths while apples have declined about one-tenth. Peak apple production was reached in the late 1920's and early 1930's. Bearing surface in this area appears adequate to maintain the present level of production for most fruits and to increase moderately for peaches and grapes in the next few years if growers care for orchards and fertilize as well as during the war years.

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## Fertilizer: Desirable Patterns of Use

**D**URING the war fertilizer consumption in the United States increased at an average rate of about 10 percent annually, with supplies for the year ending June 30, 1946, from 10 to 12 percent above the quantities used the previous season. About 30 percent of this season's tonnage of fertilizer was either in the hands of farmers or local dealers by the end of the calendar year 1945. Purchase by farmers well in advance of the time of use will aid in the timely distribution of the remaining 70 percent.

NOTE.—Data on past fertilizer consumption were furnished by BPIS&AE; on 1946 supplies by PMA; on suggested future use by State production adjustment committees. The data on suggested future consumption, based on profitable use by farmers assuming a prosperous agriculture, are not forecasts.—Author.

Nitrogen and potash supplies for the year ending June 30, 1946, will be slightly in excess of quantities available during the previous year. Increases in the supply of phosphoric acid will be quite substantial. The outlook for increased supplies of superphosphate during the current season continues to be favorable. Production of normal superphosphate for the six months ended December 31, 1945, was about 20 percent above the production for the corresponding period in 1944. The release of sulphuric acid to the superphosphate industry as a result of cutbacks in the munitions program was largely responsible for the high rate of production achieved during the first five months of the current season. Beginning in late February, additional



tonnages of sulphuric acid representing the remainder of ordnance stocks are to be released for civilian use including the production of superphosphate.

Although fertilizer supplies for use in the United States will be nearly adequate to meet the need for a high level of food production in 1946, there is a serious fertilizer shortage throughout the rest of the world.

#### Desirable Patterns of Use

The use of fertilizer on crop and pasture land results not only in increased yields but also provides an effective instrument for establishing improved patterns of land use. Better land use is largely dependent on the use of soil fertility influencing practices, of which fertilizer is one of the most important in many areas. Establishment of rotations involving successful growth of legume hay and rotation pastures generally requires application of phosphate and potash fertilizers, along with use of lime, except in areas where the natural level of soil fertility is high. These soil treatments then form one of the essential bases for the establishment of stable farming systems built largely around livestock production.

For the most part, though, extensive use of commercially produced nitrogen is primarily limited to cash crop areas

or to the production of certain cash and non-legume feed crops in the more general farming areas where the nitrogen and organic matter content of the soil is relatively low. In general farming areas, where legume crops are grown successfully in rotation, all, or most of the nitrogen added, is supplied by them and by livestock manure.

Desirable shifts in the use of fertilizer by classes of crops would support more stable and soil-conserving farming systems in all regions. In general, much heavier fertilization would be desirable for hay and pasture, as compared with the principal cash crops, as well as like increases on small grains, some of which are used as companion crops for starting new seedings of hay and rotation pasture. A large proportion of the fertilizer used on small grains benefits the hay and rotation pasture that generally follow these grains in areas where fertilizer is used. Thus an increased use of fertilizer on small grains must be counted as a further supplement to hay and rotation pasture.

Important measure of fertilizer consumption is the extent of application on land used for crops and permanent pasture. Comparisons of wartime and suggested future use are shown by regions in Table 1.

Table 1. Crop and Pasture Use of Fertilizer

Regions	Percentage of acreage fertilized			
	Land used for crops		Permanent pasture	
	Estimated 1943	Suggested for future	Estimated 1943	Suggested for future
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Northeast.....	43.0	51.7	7.5	18.2
Lake States.....	30.6	50.7	0.2	11.8
Corn Belt.....	19.9	50.8	1.7	41.1
Appalachian.....	24.3	60.9	14.6	81.7
Southeast.....	50.7	76.9	4.2	11.1
Miss. Delta.....	36.2	76.1	4.0	35.8
S. Plains.....	3.9	5.7	-----	-----
N. Plains.....	0.2	3.6	-----	-----
Mountain.....	8.8	11.5	-----	-----
Pacific.....	15.3	36.3	-----	-----
United States.....	19.8	59.9	15.7	136.3

<sup>1</sup> Does not include acreage in the Plains, Mountain, and Pacific regions as much of the land classed as permanent pasture there is extensive range land not comparable with permanent pasture on farms in the more humid regions.

Table 2.—Suggested Future Fertilizer Use, with Comparisons

Regions	Consumption of nitrogen phosphoric acid and potash			Percentage future consumption is of 1944			
	1935-39	1944	Suggested future use	Nitrogen	Phos- phoric acid	Potash	Total
	1,000 tons	1,000 tons	1,000 tons	Percent	Percent	Percent	Percent
Northeast.....	245	390	467	115	125	113	120
Lake States.....	42	137	520	259	330	522	850
Corn Belt.....	147	337	1,191	218	346	403	853
Appalachian.....	357	568	1,208	210	195	254	213
Southeast.....	429	685	1,107	177	151	182	166
Miss. Delta.....	85	183	459	209	205	272	281
Other.....	84	222	424	155	235	112	191
United States.....	1,369	2,502	5,376	182	214	247	215

Approximately 20 percent of the land used for crops (excluding idle and fallow land) in the United States received applications of fertilizer in 1943, but full economic use under prosperity conditions would double this figure in the postwar period. A still greater relative increase would result in the greater percentage of permanent open pasture receiving fertilizer. Less than 6 percent of the permanent open pasture in humid regions was fertilized in 1943 but applications would pay on more than 30 percent. Sixty percent of the total acreage used for crops and about two-thirds of the permanent open pasture in the humid regions would receive no fertilizer even if these suggestions were fully adopted.

In terms of nitrogen, phosphoric acid and potash contained in the fertilizer, hay and pasture crops received about 521 thousand tons in 1943, but suggested future consumption is 1430 thousand tons. The comparable figure for the principal cash crops are 997 thousand and 1782 thousand tons, while those for other crops are 780 thousand and 2165 thousand tons.

Total consumption of plant nutrients in fertilizer would be increased 115 percent over that used in 1944 if suggestions of State Production Adjustment Committees are carried out. Significantly greater increases would be made in phosphoric acid and potash, than in nitrogen consumption. This reflects the desirability of more

legume crops, essential to greater stability in systems of farming. Table 2 presents data showing consumption of plant nutrients in fertilizer used in the United States during the prewar period, in 1944 and suggested quantities for the years ahead.

The Southeast has generally ranked first in consumption of commercial plant nutrients, but during the next few years consumption there would be slightly exceeded by that in the Appalachian region and in the Corn Belt, if the suggested changes should materialize. The Lake States, the Northeast and the Mississippi Delta States would follow in importance. These suggested regional changes in emphasis reflect the desirability of use of increasingly greater quantities of fertilizer on hay, pasture and other feed crops, relative to that used on cash crops.

#### Effects of Increased Use

Increased use of fertilizer along the lines suggested here would aid in the establishment of more stable systems of farming. This means inclusion of more feed crops, more soil improvement crops and livestock enterprises in cash crop systems in the principal cotton and tobacco areas. These areas are already heavy users of fertilizer, but suggestions call for relatively larger increases in its use on hay, pasture and small grains than on cash crops.

Such shifts in use of fertilizer would be in keeping with needed develop-

ments toward increased production and consumption of dairy products and meat animals, relative to cereal crops, and cotton. This would create an opportunity for better living both on farms and in urban centers in the predominantly cash crop areas. Fertilizer is an effective potential instrument to bring about these needed changes in the pattern of crop production and in the general level of nutrition. When used to accomplish such objectives it also becomes an effective agent to promote soil conservation and to bring about production adjustments that are likely to be more in balance with market demands.

Judicious use of fertilizer also brings increased efficiency in the production of crops to which applied and often to succeeding crops. More information is needed to aid farmers in determining the most profitable quantities of recommended grades of fertilizer to apply to different crops under different soil and climatic conditions. Small farms gain a relatively greater advantage from the use of fertilizer, as compared with large farms, because its use affords an effective means of increasing the size of business conducted on a given acreage. This advantage does not hold true in the case of practices that only increase the amount of work that can be done

by one man, such as adoption of large scale machinery. Increased mechanical efficiency of this type gives greater advantages to the larger farms.

Because of the effect of the suggested use of fertilizer in bringing about stability in farming, in furnishing a foundation on which to build better health and nutrition, in developing a balanced pattern of production more in keeping with market demands, and in promoting higher levels of general farm operating efficiency, particularly on smaller farms, there is good reason for increasing its use to a greater extent than is the case for many other farm practices.

To attain the objectives indicated, however, it is necessary that the suggested increase in the use of fertilizer be accompanied by other changes in land use and practices. This is necessary in order to avoid using fertilizer merely as an instrument to increase the total production of those crops for which there is again likely to be a world surplus. More fertilizer rightly used in conjunction with other practices in developing needed changes in farming systems, can become one effective means of avoiding a prolonged surplus crop problem in the years ahead.

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## Release of 1945 Farm Census Data

THE area of the average American farm has grown nearly one-tenth in the past five years, from 174 acres in 1940 to slightly more than 190 acres in 1945. With about 86,000 fewer farms, there are nearly 82,000,000 more acres in farms. The preliminary totals are now 1,143,000,000 acres comprising 6,011,000 farms, compared with 1,061,000 acres and 6,097,000 farms in 1940.

Tabulated in the field, these preliminary figures were recently released and are subject to revision. By early March they were the only United States totals available, but more data are being tabulated as rapidly as possible. Despite manpower shortages and other difficulties in making a wartime enumeration of the Nation's six million farms, it is anticipated that a considerable amount of compre-

hensive census data on these farms and their people will become available by summer and fall.

Because of the method used in making the enumeration this time, it is possible to total the data by counties and States for many crop and livestock items before transferring other data to punch cards. Thus preliminary totals for these items are now available for many counties and a few States. United States totals for these items will become available just as soon as all counties and States are tabulated.

The items being tabulated by hand in this fashion deal with the acres and production of specified crops, numbers of livestock, and quantities of specified livestock products. These tabulations are being published as Advance County Release No. 1 as rapidly as possible, with reports on nearly a third of the counties having already been released. It is expected that these advance releases for all counties and States will be available by July 1946.

Meanwhile other urgently needed data are being transferred to punch cards for machine tabulation and are being summarized and released as rapidly as possible in reports designated as Advance County Release No. 2 and Advance State Release No. 2. The first county release will be available in March, with all county and State release scheduled for completion by November 1946.

The principal items to be included in this second series of advance releases are: (1) land use, value of land and buildings, value of implements and machinery including number of farms classified by value of implements and machinery; (2) farm dwellings and population, color, age, residence and years on farm for the farm operator; (3) work off farm by farm operator including number of operators classified by days worked off farm; (4) farms reporting running water, electricity, radio and telephone in farm dwellings; (5) farms reporting electric distribution

line within  $\frac{1}{4}$  mile of farm dwelling; (6) distance to all-weather road; (7) number of tractors, motor trucks and automobiles; (8) farm labor and cash wages paid for hired labor; (9) value of farm products by source of income; (10) farm mortgage debt for owner-operated farms; (11) land in farms, cropland harvested, and value of land and buildings for farms classified by tenure of operator (color and tenure in the South) and by size; (12) number of farms classified by total value of farm products; and (13) total value of farm products and value of products used in farm households for farms classified by type and value of products.

To further speed the availability of preliminary national estimates of many of these items, the data of 223 sample counties are now being tabulated. Receiving top priority in Census processing operations, the information for this sample is expected to be available sometime in April 1946. Preliminary national estimates can then be projected from the sample.

The final printed reports this time will be on a somewhat different basis than in the past. A report will be published for each State (in a few cases information on neighboring States will be combined in one report) which will contain all the data for that State. These reports will contain the data in the advance releases, revised where necessary, together with additional special tabulations and historical comparisons. Each State report providing figures by counties, will be issued as rapidly as possible after the advance releases and special tabulations for the State are completed. A printed United States summary, giving figures by States, will be issued as soon as the last State report is completed.

In addition, a General Report for the United States will summarize the 1945 census information on a subject-matter basis. Separate reprints for individual subject-matter chapters will also be available for general distribu-

tion. All of the final printed publications will be available, when issued, from the Superintendent of Documents. The advance releases are available from the Bureau of the Census.

To obtain more information about the Nation's farms and their people than in previous censuses, 70 additional questions were asked of a sample of about 6 percent of the farms. Information on this sample, known as the Master Sample of Agriculture,

consists largely of more detailed data on the items contained in the advance releases, described above. Present plans call for the preparation of State and National estimates for most of the items in the Master Sample, to appear in special advance releases as well as in the General Report for the United States.

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## Sweet Corn Production and Utilization

CORN is as American as the Indian, and so is corn on the cob in the diet of the average American family. The Iroquois Indians cultivated at least two sweet varieties of corn and the first white settlers in New England quickly learned to raise and eat corn, on the cob in the summer and as corn meal or dried corn in the winter.

### First Canned in Maine

Credit for packing the first canned sweet corn is given to Isaac Winslow, a Yankee sailor who began experimenting with corn canning in 1839 in an effort to add variety to the universal sailor's diet of "salt horse" and sea biscuits. After two decades of experimenting in Maine, Winslow succeeded and convinced the skeptical United States patent office that he had found a way to keep sweet corn and was granted a patent in 1862. Thus, Maine has the distinction of being the birthplace of the sweet corn canning industry. However, problems of canning sweet corn on the cob were not completely solved and, until comparatively recently, practically all of the canning has been done with corn cut from the cob. Succotash and more recently frozen corn have

been included in the stock of the modern grocery store.

Since its inception, the commercial canning of sweet corn has been a thriving industry. In 1908, less than forty years after one of the earliest canneries began operations, nearly seven million cases of canned corn were packed. In 1918, about 275,000 acres were harvested and 536,000 tons were used for commercial canning purposes from which nearly 12 million cases were obtained. In 1945, almost 475,000 acres were harvested and the production for processing totalled 1,126,800 tons. Over 29 million cases were packed in 1945. Growers received nearly 22 million dollars in 1945 for sweet corn for processing.

### Acreage Moving Westward

The changes in the acreage of sweet corn harvested for processing from 1918 to 1945 in the United States are shown in the accompanying chart. There is a marked increase during this period with a tendency toward a five to seven year cycle in the acreage. Low points occurred in 1921, 1927, 1932, 1936, and 1939. Since 1940, the acreage has been held at relatively high levels, due to high prices and large wartime demands.

The practice of contracting with growers for acreages of sweet corn has been quite generally followed. Practically all of the crop is produced with an agreement between the processor and the grower. The tendency among processors has been to increase their acreages from year to year until they have built up their inventories. Then there is a period of downward adjustment. The other chart indicates the acreage pattern in recent years.

For many years, there has been a tendency to shift the sweet corn acreage westward. Maine and other New England States still make up an important area. New York, Maryland, and Pennsylvania also contribute generously each year to the United States production. But many of the large companies have concentrated their operations in the Middle West. The soil is rich and conditions are favorable for high yields per acre at low cost per unit. This natural advantage has attracted large operators to the Great Lakes and Upper Mississippi Valley areas.

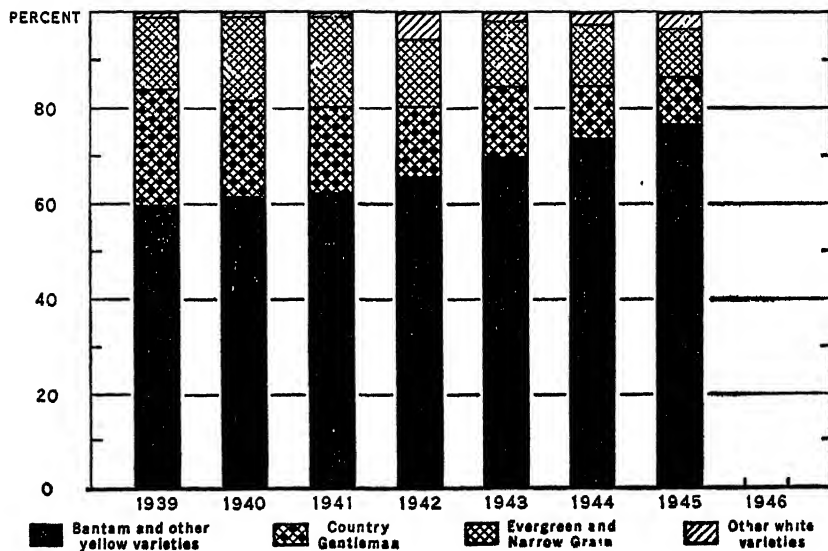
Last year, Wisconsin, Minnesota, and Illinois were at the head of the list of commercial producing States. The addition of Iowa, Indiana, and Ohio to the first three States accounted for nearly three-quarters of the acreage harvested in the United States in 1945. Another significant development in recent years has been the expansion in the Northwest, where considerable activity is taking place in the freezing of sweet corn.

Geneticists and practical sweet corn growers have interested themselves for many years in developing varieties of sweet corn that are adaptable to local growing conditions, profitable to the growers, and suitable for canning and freezing. Canners are eager for a corn that will yield a relatively large number of cases of the finished product from a ton of the fresh corn. A quality product is also sought in an effort to meet the discriminating taste of the American consumer.

#### Shift to Hybrid Varieties

Present day seed houses offer a large number of different varieties, some of

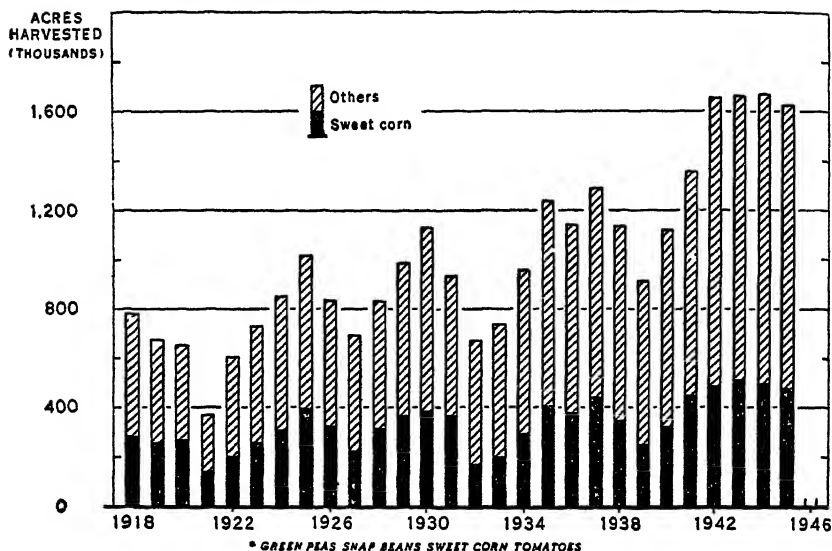
**SWEET CORN FOR PROCESSING: ACREAGE PLANTED, BY TYPES, IN PERCENTAGE OF TOTAL ACREAGE, UNITED STATES, 1939-45**



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

# ACREAGE OF FOUR IMPORTANT TRUCK CROPS\* HARVESTED FOR PROCESSING, UNITED STATES, 1918-45



U. S. DEPARTMENT OF AGRICULTURE

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which are Crosby, Stowell Evergreen, Country Gentleman and Golden Bantam. Various hybrids are attaining prominence in commercial production. In recent years, the tendency has been to plant more of the yellow varieties, such as the Yellow Bantam and yellow hybrid seed. In 1939, about 60 percent of the acreage planted consisted of yellow Bantam and other yellow varieties. By 1945 nearly three quarters of the acreage was planted to yellow varieties. White varieties, such as Country Gentleman, Evergreen, Narrow Grain types and a few other miscellaneous varieties were used for the rest of the acreage.

In present day practice, the use of hybrid seed has very likely had a bearing on the yield obtained per acre. However, conditions through the growing season with respect to moisture, temperature and the number of frost free days have also exerted considerable influence on yields. For the country as a whole, this has ranged from 1.63 tons per acre in 1936 to a high point of 2.66 tons obtained in

1939. The record high production totalling 1,282,500 tons, was harvested in 1942.

Conforming with the shift in acreage to yellow varieties, the canned pack has been made up mostly of yellow sweet corn. Over 60 percent of the canned pack in 1939 was made from yellow varieties, and packed either as whole grain or cream style. In 1945 more than three-fourths of the pack was made from yellow type corn. The rest has been obtained from white varieties, packed mostly as cream style. The pack of corn on the cob has never exceeded a million cases.

## Frozen Corn Gaining Favor

Frozen sweet corn is gaining favor from the American consumer. It is available, either cut off of the cob or frozen on the cob. Estimates place the quantity used for freezing in 1945 at not less than 56,000 tons. This compares with 48,300 tons utilized for freezing in 1944 and is about 5 percent of the total 1945 production for all processing. For 1938, the first

year for which records are available, about 15,800 tons of sweet corn were frozen and this was less than 2 percent of the tonnage produced that year for all processing.

The sweet corn acreage goal for 1946 is slightly below the 1945 planted acreage. The schedule of designated prices to growers for 1946 are the same as the average prices approved for sweet corn in 1945. If growers follow the suggestions advanced for this season's operations, 1946 will be the fifth year in succession that plantings have been in excess of 500,000 acres.

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## COTTON

THE mid-February price of Middling  $1\frac{1}{8}$ -inch cotton was 26.31 cents per pound at the 10 spot markets, 1.89 cents above a month earlier and 4.65 cents above a year earlier. On February 15 the price received by farmers was 23 01 cents per pound, 0.65 cents above the January 15 price and 3.02 cents above a year earlier.

The low level of prices received by farmers relative to the market price of a given quality, such as Middling  $1\frac{1}{8}$ -inch, reflects the large proportion of poor quality cotton in this year's farm marketings. The large proportion of poor quality cotton in farm marketings was caused by bad weather and labor shortages during the picking season.

The 1945 crop of cotton was estimated at 9,195 thousand 500-lb. bales as of December 1 which compares with the 1944 crop of 12,230 thousand bales and with the 1934-43 average of 12,293 thousand. The decrease in production from 1944 to 1945 results from a reduction in harvestings of 2.3 million acres and a reduction in yield of 43.9 pounds per acre.

Consumption of all cotton by domestic mills has been falling off since

1942 while the margin between the market prices of cotton and the prices of 17 standard cloth construction has fluctuated around the same general level. A tight labor situation in the industry is being eased by returning war workers and veterans. Average hourly earnings in cotton manufacturing establishments increased from 57.6 cents in September, October and November 1942 to 70.3 cents in the corresponding months of 1945.

Cotton exports in the first 5 months of the 1945-46 season totaled 1,138,736 running bales as compared with 607,284 bales for the corresponding months a year earlier. A total of 1,924,377 bales (excluding small army exports) were exported in the crop year ending last July. In June 1945 exports started going to the liberated countries in significant volume but are still not as widely distributed among countries as in prewar years. Through November 1945 no cotton had been exported to Germany or Japan, both of which were large prewar importers of the low qualities of cotton now in heavy supply in this country. The United Kingdom is taking about one-fourth as much as her 1934-38 average and less than one-half of her 1944 imports, then under lend-lease.

The year 1945 saw the establishment of new production records for wheat, oats, tobacco, rice, popcorn, hops, peaches, pears, grapefruit, almonds and truck crops for fresh market.

United States farmers produced the fourth consecutive 3-billion bushel corn crop in 1945, with two States—Indiana and North Carolina—exceeding all previous production records.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) <sup>1</sup>	Income of industrial workers (1935-39=100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities interest and taxes		Dairy products	Poul-try and eggs	Meat ani-mals	All live-stock
1910-14 average.....	58	80	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	158	161	180	148	148	154	163	158
1920-24 average.....	75	122	160	161	178	178	159	163	123	142
1925-29 average.....	98	129	143	155	188	179	100	155	148	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	192	234	139	180	148	212	162	146	171	104
1945 average.....	203	276	164	180	174	350	197	196	210	203
1945										
February.....	236	324	154	179	172	-----	200	183	209	201
March.....	275	322	154	180	173	-----	118	175	211	200
April.....	230	314	154	180	173	835	194	176	215	201
May.....	228	302	155	180	173	-----	192	179	217	202
June.....	220	301	155	180	173	340	191	189	216	203
July.....	211	287	155	180	173	362	192	197	215	205
August.....	187	260	154	180	173	-----	195	207	212	206
September.....	170	222	154	181	174	-----	197	201	207	203
October.....	163	215	155	182	175	855	199	204	202	202
November.....	168	220	158	183	175	-----	202	218	203	206
December.....	164	223	156	183	176	-----	204	222	204	207
1946										
January.....	159	-----	156	184	177	347	203	197	206	204
February.....	-----	-----	-----	185	178	-----	202	168	214	202

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio <sup>1</sup>	
	Crops							All crops and live-stock		
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil bearing crops	Fruit	Truck crops			All crops
1910-14 average.....	100	101	102	96	98	99	-----	99	100	100
1915-19 average.....	193	164	157	168	187	125	-----	168	162	106
1920-24 average.....	147	126	192	189	149	148	143	160	151	86
1925-29 average.....	140	119	172	145	129	141	140	143	149	80
1930-34 average.....	70	76	119	74	72	94	106	86	90	69
1935-39 average.....	94	95	173	83	106	83	102	97	107	84
1940-44 average.....	123	119	245	131	169	133	172	143	154	103
1945 average.....	172	161	366	171	215	220	224	201	202	116
1945										
February.....	169	164	380	161	215	211	223	197	199	116
March.....	171	166	359	163	215	211	203	196	198	114
April.....	172	162	362	163	215	221	259	204	213	117
May.....	173	161	363	165	216	227	193	198	200	116
June.....	173	162	394	169	217	237	269	210	206	119
July.....	169	161	364	171	221	237	244	207	206	119
August.....	167	153	367	172	215	214	240	202	204	118
September.....	167	157	365	175	213	217	150	191	197	113
October.....	175	160	373	180	210	219	181	196	199	114
November.....	178	161	375	182	213	217	235	203	205	117
December.....	178	162	378	184	213	230	223	206	207	118
1946										
January.....	179	164	375	180	213	225	249	207	206	119
February.....	180	166	368	186	212	233	275	213	207	116

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

<sup>2</sup> Total income adjusted for seasonal variation, revised September 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and worker's income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

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## *A Brief Summary of Economic Conditions*

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FARMERS this year plan another near-record acreage of crops, according to their March intentions of 17 major ones. The projected total for the 52 principal crops, if the intentions materialize, would be about 357¼ million acres, 4 percent below the goals for 1946 but slightly more than that actually planted in 1945. Acreages planned for food and feed grains are slightly higher than last year, sugar beet and tobacco acreages are substantially above, but oilseed acreages are well below. \* \* \* With nearly a half-billion people throughout the world facing starvation, the President's Famine Emergency Committee has asked Americans to cut their consumption of wheat 40 percent and fats and oils 20 percent in order to make more of these foods available for shipment abroad. And to meet its wheat export commitment of a million tons a month, the Government began buying wheat from farmers in early April to speed the movement off farms. \* \* \* To help ease domestic feed shortages in some areas, the purchase and use of feed grains is restricted beginning this month. \* \* \* By March 1 farm land values, 71 percent above the 1935-39 average, had risen as much during this war period as during the last war boom, and quick turn-over in ownership continues to increase.

# Commodity Reviews

## PLANTING INTENTIONS

**F**ARMERS this year, aware of famine or serious food shortages facing nearly a half-billion people throughout the world, intend to plant another near-record acreage of the Nation's principal crops. If plans indicated by the March 1 intentions of farmers fully materialize and if the cotton acreage is about the same as last year, this year's acreage of 52 principal crops is likely to reach 357½ million acres, a trifle above that actually planted last year, but about 4 percent below the 1946 goals.

Of course, changes in such conditions as weather, prices, farm labor and supplies of machinery and equipment may alter farmer's plans and thus change the 1946 acreage from that now intended. Farmers anticipate more than usual difficulties in the adequacy of the supply of farm labor and farm machinery for replacements as well as certain other major factors essential to their operations. But these difficulties may be no worse than they have been during the war, and conditions may even become better in the months ahead.

Prospective acreages of wheat and oats are substantially above those planted in 1945, their combined acreage being 3½ million acres more than last year. Rice, tobacco, and sugar beet acreages are indicated to be well above last year, while corn and barley acreages are a shade higher. The acreage increase over 1945 for the seven crops is indicated to be something near 3.9 million acres. Major acreage decreases are 2.3 million acres for oilseeds—flaxseed, peanuts, and soybeans—and 1 million acres for sorghums. Other acreage reductions from that planted in 1945, though slight in most cases, are indicated for potatoes, sweetpotatoes, dry beans, dry peas, cowpeas, and tame hay to be

harvested. The total of the acreage decrease from 1945 for the 10 crops is indicated to be something under 4 million acres.

Although the acreage reductions more than offset the increases, this may not be true of production as the greatest acreage reductions appear to be in some of the least productive areas. Present indications point to a close utilization of the really productive land in most States and production prospects appear better than usual for this time of year. Total output of all crops, if growing conditions are average, could equal the excellent showing made last year.

1946 Planting Intentions, with Comparisons

Crop	Planted Acreage		
	1945 Actual	1946 Goal	1946 Intentions
	Thou- sands	Thou- sands	Thou- sands
Corn, all.....	92,867	97,760	92,993
Wheat, all.....	68,781	69,875	70,901
Winter.....	50,123	-----	51,940
Spring.....	18,658	-----	18,961
Oats.....	45,234	45,668	46,444
Barley.....	11,429	13,400	11,521
Flaxseed.....	4,066	4,318	3,497
Rice.....	1,517	1,479	1,575
Sorghums, all <sup>1</sup> .....	15,837	-----	14,787
Sorghums, all (excl. syrup).....	15,688	17,093	14,616
Potatoes.....	2,896	2,771	2,738
Sweetpotatoes.....	715	781	712
Tobacco <sup>2</sup> .....	1,846	1,908	1,954
Dry beans.....	1,760	2,101	1,673
Dry peas.....	528	588	462
Soybeans, grown alone <sup>3</sup> .....	13,412	-----	11,840
Soybeans for beans <sup>4</sup> .....	10,873	10,700	9,371
Peanuts, grown alone <sup>5</sup> .....	3,958	-----	3,759
Peanuts, picked and threshed <sup>6</sup> .....	3,183	2,500	2,986
Tame hay, all <sup>4</sup> .....	59,905	61,313	59,791
Sugar beets.....	775	1,032	933

<sup>1</sup> BAE Winter Wheat and Rye Report of December 20, 1945.

<sup>2</sup> For all purposes.

<sup>3</sup> All sorghum acreage less 1945 acreage harvested for syrup, by States.

<sup>4</sup> Harvested acreage.

<sup>5</sup> 1946 indicated solid equivalent acreage adjusted for the percentage harvested for beans.

<sup>6</sup> Assuming the usual relationship of acreages planted alone to acreages for picking and threshing, by States.

Aggregate acreages planned in 1946 are near or above 1945 planted totals in most Northeastern, North Central and Western States. Unfavorable conditions for fall seeding in most South Atlantic and South Central States and in some East North Central States reduced acreages of oats, barley and wheat and consequently the aggregate in those areas.

The acreage which farmers intend to plant to feed grains shows an increase of a third-million acres over 1945 plantings. The intended increases for oats, barley and corn, more than offset the decrease in sorghums.

The prospective increases in the wheat acreage supports earlier hopes for another billion-bushel wheat crop in 1946. Rice acreage is now expected to reach an all-time record of 1,575,000 acres, 4 percent above the 1945 acreage. Rye acreage planted last fall was 17 percent less than for the 1945 crop. But as a whole; the total food grain acreage now intended is 2 percent above that planted in 1945.

Prospective acreages of oilseeds are well below recent high levels, with soybeans showing a decrease of 12 percent, flaxseed down 14 percent and peanuts down 5 percent from 1945 planted acreages.

Percentage-wise, the sugar beet acreage intended shows the largest increase, being 20 percent more than the acreage planted in 1945 and one of the largest acreages in recent years. If present intentions materialize, this year's tobacco acreage of 1,954,000 acres would be the second largest on record and 6 percent above that planted in 1945.

## LIVESTOCK

**D**EMAND for meat will continue strong through the remainder of 1946, with Government purchases for European shipment likely to be at least as large as in 1945, and with continuing high incomes of domestic consumers. Total meat demand is

likely to exceed production for most of the year at least, and will assure a continuing high level of meat animal prices. Prices of all classes of meat animals probably will be at or near present levels through midyear. Prices and unit returns to producers during the latter half of the year will depend partly on ceiling prices and subsidy programs in effect at that time.

In the interest of conserving feed supplies the 50-cent per 100 pound subsidy paid on higher grade cattle marketed for slaughter will be terminated June 30, 1946. This subsidy had the purpose of encouraging the grain feeding of cattle and the feeding of cattle to heavier market weights. Lowering the ceiling price on heavier weight butcher hogs after September 1 is now under consideration as well as a reduction in slaughter subsidy on heavier hogs before September 1, both to encourage farmers to finish hogs to lighter weights as a feed conserving measure. Authorization to continue slaughter subsidies and payments to sheep and lamb producers after June 30, 1946 depends upon Congressional action.

To secure a more equitable distribution of the current short feed supplies the Government recently issued orders governing the use of feed grains and byproduct feeds. A livestock feeder buying his feeds cannot feed his hogs to more than 225 pounds nor finish his cattle to better than good grade.

Despite cattle subsidy, cattle feeding operations for feeders who purchased cattle last fall for sale during the first 3 months of 1946 have not been as profitable as during the period a year earlier and have been much less profitable than in the preceding two seasons. During the first 3 months of 1946, prices of fed cattle averaged about \$1.00 per 100 pounds higher, but the initial cost of feeder cattle last fall was greater than a year earlier. Prices of feeder cattle continue high.

## Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Parity ratio <sup>1</sup>
1910-14 average.....	100	100	100
1915-19 average.....	162	150	108
1920-24 average.....	151	173	86
1925-29 average.....	149	168	89
1930-34 average.....	90	185	66
1935-39 average.....	107	128	84
1940-44 average.....	154	148	103
1945 average.....	202	174	116
<b>1945</b>			
March.....	198	173	114
April.....	203	173	117
May.....	200	173	116
June.....	206	173	119
July.....	206	173	119
August.....	204	173	118
September..	197	174	113
October.....	199	175	114
November...	205	175	117
December...	207	176	118
<b>1946</b>			
January...	206	177	116
February...	207	178	116
March.....		179	117

<sup>1</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

## DAIRY PRODUCTS

MILK production in 1946 is now expected to be below the record 122.2 billion pounds reached in 1945, primarily because of a decrease in cow numbers. But if average weather prevails in 1946 and if feed supplies do not become extremely short, milk production per cow may not be much different than the record high of 4,789 pounds attained in 1945.

Seasonal increases in supplies of dairy products has narrowed the wide gap between the supply and demand which prevailed during the late fall and early winter. But the over-all demand for dairy products will exceed supplies at current prices during the remainder of 1946. Even though milk production may be smaller this spring and summer than in the corresponding seasons of 1945, reduced noncivilian takings will more than offset the decrease in production, so

that total civilian supplies of dairy products probably will be greater.

Supplies of fluid milk and cream during the second and third quarter will be ahead of last year. After accounting for probable exports, domestic supplies of other manufactured dairy products during the flush season may also be larger than last year, even though output will be reduced. But supplies of butter will be far short of demand. With no seasonal variation of butter prices under present price ceilings, little if any storing of butter is expected this year. Hence, civilian butter supplies during the last quarter of 1946 may not be much more than half those of the second quarter.

With sustained strong demand for food continuing, utilization of skim milk will be near record levels. Strong demand will continue for non-fat dry milk solids in large part due to its desirability for export. Demand for other skim milk products will be strong, with little, if any, decline from present prices expected.

## POULTRY AND EGGS

DEMAND for eggs during March was strong and prices were at or near ceiling levels, after a sharp decline in early February.

Prices received by farmers for eggs during the second half of 1946 probably will average moderately below those of the second half of 1945. Production of eggs may be somewhat smaller. But large cold storage holdings and declines in Army procurement will leave more eggs available for civilians.

In order to aid producers in marketing their poultry in the present feed emergency, a chicken price support program has recently been put in effect. Purchases of dressed chickens (except chickens weighing 3½ pounds or less, live weight) are to be made so as to reflect a United States average farm price of not less than 90 percent of parity. Currently, this would mean support at a national average of 18.4

cents per pound, with variations for type, weight, and location. In mid-March the average price received by farmers for chickens was 23.3 cents per pound, 114 percent of parity. Since mid-March wholesale prices of chickens have increased, particularly on light weight birds.

There will be less chicken meat produced in 1946 than in 1945 because fewer chickens will be raised and because commercial broiler output will be less. But, with a sharp reduction in military takings and record cold-storage holdings, civilian supplies of chicken meat will not be greatly different from last year. Military takings of chicken meat in 1945 were 250 to 300 million pounds, about one-twelfth of total slaughter.

Prices received by farmers for turkeys during the 1946 marketing season are expected to average moderately below 1945. However, prices received for small turkeys (under 16

pounds) are not expected to be much below the 1945 levels. But, as in prewar years, there probably will be wide differentials between large and small turkeys so that prices received for heavy-weight birds will be substantially below light-weight birds. Civilian supplies of turkeys during the last half of 1946 will be near the record supplies reached in 1945, despite a prospective decline of as much as 10 to 15 percent in production. Extremely large cold storage holdings and reduction in military procurement will nearly offset any decreases in slaughter.

## FATS AND OILS

WORLD demand for fats and oils exceeds world supplies, yet increased exports from the Far East and greater production of animal fats in Europe will be gradual. Fat production in Europe in the 1945-46 crop year is well below the prewar level, and 1946 export supplies of fats

### Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Mar. 15, 1945	Feb. 15, 1946	Mar. 15, 1946	Parity price Mar. 15, 1946
	August 1909- July 1914	January 1935- December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.45	1.55	1.58	1.58
Rice (bushel).....do.....	0.813	0.742	<sup>1</sup> 1.81	1.77	1.89	1.46
Corn (bushel).....do.....	0.642	0.691	1.07	1.11	1.14	1.15
Oats (bushel).....do.....	0.399	0.340	.740	.731	.751	.714
Hay (ton).....do.....	11.87	8.87	18.10	15.80	16.30	21.20
Cotton (pound).....cents..	12.4	10.34	20.24	23.01	22.70	22.20
Soybeans (bushel).....dollars..	<sup>2</sup> 0.96	0.954	2.13	2.11	2.12	<sup>3</sup> 1.72
Peanuts (pound).....cents..	4.8	3.55	8.20	8.43	8.63	8.59
Potatoes (bushel).....dollars..	0.697	0.717	<sup>1</sup> 1.73	1.46	1.57	1.80
Apples (bushel).....do.....	0.96	0.90	2.54	3.75	3.68	1.72
Oranges on tree, per box.....do.....	<sup>4</sup> 1.81	1.11	2.36	2.12	2.21	<sup>5</sup> 2.10
Hogs (hundredweight).....do.....	7.27	8.38	14.00	14.20	14.20	13.00
Beef cattle (hundredweight).....do.....	5.42	6.56	<sup>1</sup> 12.50	12.60	18.10	9.70
Veal calves (hundredweight).....do.....	6.75	7.80	<sup>1</sup> 13.50	13.90	14.10	12.10
Lambs (hundredweight).....do.....	5.88	7.79	13.80	13.30	13.60	10.60
Butterfat (pound).....cents..	28.3	29.1	50.7	50.8	51.2	<sup>6</sup> 47.8
Milk, wholesale (100-pound) <sup>7</sup> .....dollars..	1.60	1.81	<sup>1</sup> 3.21	<sup>1</sup> 3.34	<sup>1</sup> 3.29	<sup>6</sup> 2.81
Chickens (pound).....cents..	11.4	14.9	25.0	23.1	23.2	20.4
Eggs (dozen).....do.....	21.5	21.7	33.1	32.6	32.1	<sup>6</sup> 32.7
Wool (pound).....do.....	18.3	23.8	39.9	40.6	40.7	32.8

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1919-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

and oils from world surplus-producing areas (North America excluded) are tentatively estimated at about 5½ billion pounds, 4 billion pounds less than prewar though 1 billion pounds more than in 1945.

A moderate increase in civilian supplies of butter in the United States is likely this spring and summer as a result of the seasonal increase in butter production. However, unless butter is stored in sizeable quantities during the flush-production season, supplies are likely to become extremely short again next fall and winter. For 1946 as a whole, United States civilian supplies of all food fats per person—butter, margarine, lard, other shortening and edible oils—probably will be about the same as the 42 pounds consumed last year, with no significant increase in any of the major items. At this level, supplies per person will be 6 pounds below the 1935-39 average.

Little improvement in supplies of oils and fats for industrial nonfood use is in prospect before the latter half of the year. Stocks of inedible fats are usually small. The stringency in linseed oil supplies was intensified in January and February by a slow movement of flaxseed to terminal markets, despite substantial supplies apparently still in country positions. Imports of flaxseed, though expected to increase this year, were small in January and February.

Although copra imports have increased, starting this spring, they are still far below prewar levels. This year's imports of other industrial fats, such as palm oil and tallow, are now expected to be below those of 1945.

## VEGETABLES

**G**ROWERS plan to produce an ample supply of spring vegetables again this year. Present indications on commercial truck crops, assuming good growing weather, point to above average supplies for all important crops except early spring asparagus. Green onions and melons apparently

will be in particularly good supply relative to last spring. Strong market demand for spring vegetables are expected to support prices in general nearly as high as last year.

Urban gardens, encouraged again this year in the light of world food shortages, will supplement commercially grown vegetable supplies, but are not expected to depress appreciably the demand for commercial supplies.

Acreages now planted of early commercial potatoes for spring shipment are expected to provide adequate supplies—if growing conditions are favorable—to meet the early season demand for new potatoes.

## CASH RECEIPTS

**R**EVISED estimates of cash receipts from farm marketings of crops are now placed at 9,059 million dollars for 1945, as compared with 9,039 million dollars for 1944. A sharp decline from 1944 during 1945 in cash receipts from the small cotton crop more than offset substantial gains in tobacco, feed crops, and sugar crops.

Cash Receipts from Farm Marketings of Crops, 1944 and 1945

Crop group	1944		1945 as percent of 1944
	Mil. dol.	Mil. dol.	Percent
Food grains.....	1,328	1,313	99
Feed grains and hay....	1,194	1,373	115
Cotton and cottonseed..	1,497	1,034	69
Oil crops.....	588	570	98
Tobacco.....	689	954	138
Fruits and nuts.....	1,504	1,452	97
Vegetables.....	1,567	1,642	105
Sugar crops.....	133	168	126
Other crops....	530	547	101
Total.....	9,039		100

NOTE.—Revised estimates of cash receipts from marketings of livestock and livestock products are not yet available.

## TOBACCO

**D**OMESTIC consumption of tobacco products continues at a high level though below the war end peak. Tax-paid withdrawals of cigarettes in January amounted to 25.2 billion compared with 20 billion a year earlier. With substantial decreases in

military personnel, however, the reduction in tax-free cigarette withdrawals has been more than the increase in tax-paid withdrawals. Tax-paid withdrawals of cigars in January amounted to 473.0 million compared with 387.4 million a year earlier.

Burley auction markets closed on March 15 with prices averaging 39.4 cents a pound for the season compared with 44.0 cents a year earlier. During the first week of the sales, December 3 to 9, 1945, about 15 percent of the crop was sold at an average of 47.5 cents a pound, but as the marketing season progressed, prices declined substantially, to 28.6 cents for the last week of the season. Despite the break in prices, farmers received about 238 million dollars from the 1945 burley crop, only 22 million less than the 1944 crop, the highest since 1920.

This season's lower burley prices were largely the result of the large supply which exceeded that of 1944-45 by 100 million pounds; reduced 1946 domestic demand in relation to wartime peaks; lack of an important burley export market. After the break in burley prices, legislation was passed authorizing burley acreage allotments, and the Department of Agriculture announced an over-all cut of 10 percent in burley acreage for 1946.

The demand for dark air-cured tobacco has remained strong enough to maintain prices at or about the levels which prevailed last season. Individual 1946 farm acreage allotments for Green River and One Sucker will be 10 percent larger than in 1943, when allotments were last in effect.

Prices of fire-cured tobacco have been rising steadily since the markets opened. The market for Virginia fire-cured (type 21) closed on February 21 with a season average price of 32.4 cents, the highest on record. Marketings of Eastern District fire-cured (type 22) are now 81 percent complete and the season price through late March averaged 32.9 cents compared with the 1944-45 season average of

25.2 cents. The Western District fire-cured (type 23) markets closed on March 15 with a season average price of 29.4 cents per pound compared with 22.9 cents last season. Marketing quotas for the 1946 crop of fire-cured tobacco are in effect, with individual farm acreage allotments 20 percent higher than the 1943 allotments.

## FARM LABOR

FARM employment on April 1 was slightly above the level of a year earlier and the seasonal increase, from the record low of last January 1, was greater than usual. But just the number of persons working on farms does not give a complete picture of the supply of farm labor. Although veterans and war workers are not returning to farm work in large volume, a considerable number are, and many are replacing less able-bodied persons who had done so much of the farm work during the war. Thus the reduction in the volume of work performed is not as great as the reduction in the work force from prewar.

Normally farm labor tends to move from agriculture to higher paying industrial employment when plenty of jobs are available in industry. At present an increasing number of farm workers are seeking jobs in industry, and employment has increased considerably in many industries seriously short of labor during the war. This, together with 6½ million separations from the armed forces by February 1, has had the effect of "loosening up" the manpower requirements of major industrial areas. On February 1 only three cities were classified as having "tight" manpower requirements while over 100 were classified as "loose" or "surplus."

Hence, industry is beginning to be more selective in hiring new persons and is starting to weed out less efficient workers. Farmers are beginning to do the same, and an increased output per farm worker compared to 1945 is in prospect for the coming season.



# Land Values Continue to Rise Sharply

THE sharp increase in farm land values of 13 percent during the year just ended last March 1 was exceeded in only two previous years, 1920 and 1944. The rise in average per acre values during this war period is now as great as during World War I. Last year's volume of farm real estate sales was slightly higher than in 1944, but below the record volume of 1943, and was accompanied by a considerable number of farms which were resold after only limited periods of ownership. More than one-half of all sales were entirely for cash, but a significant proportion had relatively heavy indebtedness.

Farm land values for the Nation as a whole rose 13 percent during the 12 months ended March 1, 1946, bringing the United States index (1912-14=100) to 142, a rise of 7 percent from November 1, 1945, and 71 percent above 1935-39 average. An increase larger than the current 13 percent rise has occurred in only 2 of the last 35 years for which data are available. Average values rose 15 percent during the year ended March 1944 and 21 percent in 1919-20, at the peak of the World War I boom. Land value increases during the last 5 years have averaged one percent per month.

Measured from their respective prewar bases, the general course of land values so far in this war period has been very similar to that of the World War I. Average values on March 1 had increased 71 percent from the 1935-39 average and compares with an advance of 70 percent to the 1920 peak from the 1910-14 average.

The rise in values during the last year was widespread with a substantial increase reported in each State. The greatest value rise occurred in the group of States comprising the East South Central region where average values were up 18 percent from a year earlier. Values increased 14 percent

in the South Atlantic States and 13 percent in the East North Central and Pacific divisions. Average values increased 10 percent or more in all geographic divisions except in the New England and North Atlantic groups of States where increases of 8 percent were reported. Among the various States the sharpest rise in values of 20 percent, during the last year occurred in North Carolina and Tennessee. Increases of 15 percent or more were reported in 14 States and 10 percent or more in 32 States.

Data on farm real estate transfers during the last 3 quarters of 1945 for selected counties throughout the United States indicate approximately 5 percent more transfers than in the corresponding period a year earlier. Even with this increased rate continuing through the first quarter of 1946, the frequency of transfers for the year ended this March will still be somewhat below the record volume reported for a year ago.

A general increase in farm resales after limited periods of ownership contributed to the increased volume of sales during the last year. Data from selected counties during 1945 indicate that about one-seventh of all voluntary sales were resales of tracts held less than 2 years, compared with an average of about one-eighth during 1944. In the Western Region during 1945, resales within 2 years made up 21 percent of all sales as compared with 19 percent in 1944. The price increase in these resales averaged 30 percent in 1945 as compared with 39 percent in 1944. In several regions such resales made up a significantly larger proportion of all sales during the 4th quarter of 1945 than during any other quarter in the 3 years for which data are available.

The termination of World War II has as yet had little moderating effect upon the farm land market. Shortly after the end of the war,

there was some indication of a slackened demand for farm products, but later developments brought out new shortages with a substantial tightening of the food situation. As a result, prices for farm products continued to advance and cash receipts from farm marketings reached a new high in 1945.

This situation along with further additions during 1945 to the already huge amount of liquid funds in the hands of farmers and others, along with a shortage of goods to purchase, constitute strong influences on the demand side of the land market that have tended to push land prices to the present inflationary levels. However, much of the current high demand for agricultural products is likely to be of a temporary nature and hence are not likely to support continuing high land prices.

Expectations of lower farm product prices and income levels along with a recollection of the collapse in land values that followed World War I should have a tempering effect on the bids of prospective buyers of farms. At the same time the currently high land prices should tend to bring forth an increased supply of farms offered for sale by elderly farmers who wish to retire and other owners who expect to sell at near-peak prices. But these curbing influences in the farm real estate market apparently have been more than offset by the stronger inflationary forces and there is no indication that average farm land prices have reached their peak.

If land prices should continue to rise at the 1 percent per month rate of the last 5 years it would be only about a year and a half before the United States index would be at the 1920 boom level and approximately double the 1935-39 average. Although it is impossible to make any confident prediction of future land prices it is very probable that in many areas the current market prices are above levels likely to be maintained and further increases will tend to make the neces-

sary adjustments likely to follow considerably more difficult. Many of the difficulties and hardships after the World War I land boom arose as a result of a considerable proportion of land buyers incurring heavy debts that could not be repaid when farm product prices and income dropped from their wartime levels.

Available data indicate that credit has been a less important factor so far in the current land boom than in the boom following World War I. But even so, difficulties are likely to arise for many credit-financed buyers of farms and those buying for cash may well find that net returns on their land investments are very low. More than one-half of all farm sales during 1945 were entirely for cash, but for the credit financed sales, the average indebtedness was about 60 percent of the sales price. Furthermore, about 30 percent of the credit financed sales had an initial indebtedness of more than three-fourths of the sales price. While this is only about one-seventh of all sales, it still constitutes a considerable proportion and represents only those recent land buyers who need to make the most substantial mortgage debt repayments in order to avoid a precarious debt situation when farm prices and incomes fall from wartime levels. On many of these farms the debt is larger than their full market value a few years ago. A current debt of 60 percent or more of present average values would equal or exceed the average values prevailing in 1941.

An important point for prospective buyers and farmers to keep in mind is that in most areas the net income of farmers has probably reached a peak. They should, therefore, even more carefully than before, consider their possible alternative investment opportunities as well as their future debt-repayment ability before buying high priced land or taking on any more debts.

A. R. JOHNSON  
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# The Wheat Picture

**D**URING the next few months, before the 1946 crop is harvested, every bushel of wheat that can be spared is needed to reduce starvation abroad—the people of the United States are asked to reduce their consumption so that more wheat and flour will be available for export.

On the basis of January 1 wheat stocks of 689 million bushels, the January-June disappearance for feed and seed at around 90 million bushels and carry-over at 150 million, would leave about 450 million bushels for food in the United States and for export. The 80 percent extraction rate might reduce domestic food use from 270 million bushels to 250 million, while savings resulting from voluntary consumer conservation would further reduce domestic utilization.

Meeting the January-to-June export goal of 225 million bushels will require a substantial reduction in the domestic food consumption of wheat during the April-to-June period. A carry-over of 150 million bushels would be the smallest since the drought years and compares with 235 million bushels for the 1932-41 average. Moreover, just what economies will be effected by reduced wheat feeding cannot be estimated at this time.

To speed the movement of wheat off farms the Commodity Credit Corporation began buying wheat from farmers in early April. The CCC will pay the market price for any date the seller chooses, up to April 1, 1947. The CCC offer is open to farmers till July 1, 1946 unless its requirements are met before that date. Due announcement of this change is to be made. The Internal Revenue Bureau has ruled that farmers selecting market dates on or after January 1, 1947 for wheat delivered under this program may report their payments as received in 1947 for tax purposes.

With the heavy export demand for

wheat and the savings in domestic use desirable, the United States is concerned with the situation in other countries to a greater extent than usual. For the year ended June 30, 1946, minimum world import requirements will be over 1,200 million bushels. The supplies of wheat including flour for export to meet these requirements total only 875 to 900 million bushels. With exports from the United States in the July-December period about 195 million bushels, exports for the year should total from 375 to 400 million bushels, possibly more. Exports from Canada are expected to total 370-380 million bushels, Argentina 65-75 million, and Australia 40-50 million. Supplies from the Southern Hemisphere countries are below average as a result of smaller than average crops harvested in December 1945 and reduction or virtual elimination of carry-over stocks following the previous season's severe drought.

Plantings of 19 million acres of all spring wheat are in prospect this year. Prospective plantings are 1.6 percent larger than the 18,658,000 acres planted last year. A total 1946 planted acreage of all wheat of 70,901,000 acres is indicated, by combining the prospective spring wheat acreage with the winter wheat planted acreage as estimated last December. Such an all-wheat acreage would be an increase of 3 percent over last year and the largest acreage planted since 1938. It would be 1 percent above the national wheat acreage goal, exceeding the goal largely in the hard wheat States.

If the prospective spring wheat acreage is seeded and yields per seeded acre are equal to the average for the years 1937-44, by States, production of all spring wheat would be about 255 million bushels. This spring wheat production combined with the

estimated winter wheat crop of about 751 million bushels as indicated last December, would give an indicated total wheat production of about a billion bushels. This would be about 10 percent less than the record crop last year, but the Nation's fourth billion-bushel output.

Early 1946 world wheat crop prospects are more promising than the small 1945 outturn. This may be expected to reduce requirements of importing countries from the all-time high in the current marketing year, although the requirements still will continue well above average. Increased production would lessen the extreme reliance upon North American supplies, which is necessary because of poor crops in other important areas. Most sections in Europe report satisfactory conditions, with early prospects for a crop above 1945, but, because of fertilizer shortages and other difficulties, still below average. Prospects in North Africa, are reported as generally favorable. A good crop in

this area would eliminate the necessity of imports, which were necessary during the current year because of the very poor crop in 1945. In Australia, where a 140 million-bushel crop was harvested in December, the Government has approved a substantial wheat acreage increase for the next crop year. In Argentina, where a 150 million-bushel crop recently has been harvested, early soil conditions favor increased seedings. In Canada moisture conditions are decidedly better than last year.

With the great demand for wheat, cash prices in the United States are expected to continue at about ceiling levels without the usual seasonal decline preceding the harvesting of the new crop. Effective March 4, ceiling prices for wheat were increased 3 cents a bushel. This increase was made to keep prices in conformity with legal requirements.

ROBERT E. POST

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## The Feed Shortage and What's Ahead

THE current feed shortage, a repetition of conditions during part of each of the past three seasons, probably is more acute in many areas than in any year since the serious droughts of 1934 and 1936 even though feed supplies in the aggregate have been at near-record levels.

In each of the past three years additional feed supplies were obtained through imports of relatively large quantities of oats and barley from Canada as well as through Government action in making large quantities of wheat available for feed. Use of those additional supplies provided livestock producers dependent on commercial supplies with sufficient feed to carry them through the feeding season. During the current season only small quantities of grain can be obtained

from Canada or other countries, and the great need of wheat for export means that little can be spared for feeding purposes.

Although total supplies of feed grain are fairly large, and total production of byproduct feeds has been at near-record levels, the available market supplies have been inadequate to meet the exceptionally strong demand. While feed supplies in surplus producing areas are generally adequate for local use, many buyers in other areas find it difficult or impossible to obtain feed.

To a great extent, the strong demand for feed is traceable to high rates of feeding which in turn are largely the result of favorable livestock-feed price ratios. During the war, a high rate of feeding was desirable because a large

production of livestock and livestock products was essential to meet war needs and because feed supplies were relatively plentiful. Heavy feeding has continued since the war, as reflected in the current rate of output of livestock and livestock products. Hogs marketed in early 1946 averaged about 20 pounds heavier than a year earlier and heavier than any other year on record. A larger than usual proportion of steers slaughtered have been of high quality, reflecting heavy feeding. The quantity of grain and other concentrates fed per milk cow has been at record or near-record levels for many months. Poultry feeding has been heavy as indicated by the record rate of egg production per layer. Also the average weight of turkeys marketed in late 1945 and early 1946 was above any previous year, and the average weight of broilers marketed also was heavier than usual.

The discrepancy between demand for and commercial supply of grain, particularly corn, has been attributable in part to greatly increased demand for mixed feed. Industrial demand for grain especially by processors who depend almost entirely upon commercial supplies, also has increased materially. With marketings of feed grains from farms only about normal in relation to total supplies, the substantial increase in requirements of the mixed feed industry and processors have not been met. Uneven distribution of the commercial supplies further aggravates conditions.

In and effort to ease the tight feed supply situation and to provide additional food urgently needed in foreign countries, several measures have been undertaken recently: (1) farmers have been asked to further increase their acreages of corn, wheat, grain sorghums, and soybeans, (2) the increased extraction rate for wheat flour now in effect brings a higher yield of flour in milling but also reduces the rate of output of wheat millfeeds by about one-third, (3) sale or delivery

of wheat millfeed has been limited to certain classes of distributors and users, and limitations are placed on receipt of wheat millfeed and its use in the manufacture of mixed feed, (4) quantities of protein meal are specified to be set aside by processors for directed distribution, and limits are placed on the quantities of protein meal to be handled in any one month, (5) the use of grains in the production of alcohol, distilled spirits, and in fermented malt liquors is drastically curtailed, (6) permissible mark-ups on certain sales of corn and processed grain were revised downward, and (7) widespread restrictions are placed on purchases and uses of feed grains, particularly corn, by livestock feeders, mixed feed manufacturers and grain processors.

These actions are designed primarily to restore normal distribution of feed grain and byproduct feeds and also limit the use of feeds by some users. Supplementing these measures have been appeals for livestock producers to reduce the high rate of feeding, particularly by marketing hogs at lighter weights, by marketing cattle with less finish, and by heavy culling of poultry flocks.

Reduced feeding probably will occur, particularly in the deficit feed areas, largely because of the inability of many feeders to secure desired quantities of feed, at least until new-crop grain becomes available. Some downward readjustments in livestock numbers probably will occur during 1946—certain adjustments are already under way. During 1944, numbers of all species of livestock and of poultry declined from the very high levels of 1943. Numbers of horses, mules, cattle and sheep declined further in 1945, but numbers of hogs and poultry increased moderately. In terms of grain-consuming animal units, total livestock numbers on January 1, 1946 (including poultry), were slightly larger than on January 1, 1945.

A further decline in cattle numbers

is likely in 1946. Numbers of horses and mules also will continue to decline. Sheep numbers may decline further, but the number of hogs on farms at the beginning of 1947 may not differ greatly from the number on hand on January 1 this year. However, hogs probably will be marketed at lighter weights than in 1945 in the coming months. The number of chickens on farms is expected to be reduced in 1946, with a smaller number of chickens raised than in 1945. The changes in livestock numbers and in output that are in prospect will probably result in some reduction in demand for livestock feed. Most of that reduction will not be reflected, however, until summer, and by that time at least some new-crop oats and barley will be available. Also, pastures will then provide much needed feed.

The total carry-over of corn, oats, and barley at the end of their respective crop years may be two to two and one-half million tons smaller than in 1945, with all of the reduction being in corn and barley. Carry-over of

wheat also will be considerably reduced. Thus, the 1946-47 crop year will start with a relatively small total carry-over of old-crop grain. Among the grains, only the oats carry-over will be larger than average for recent years. Reserves of the other grains will be at comparatively low levels.

If farmers carry out their March 1 intentions, the combined acreage of corn, oats, barley and sorghums in 1946 will approximate 165.7 million acres, about the same as in 1945. If yields, by States, turn out about average this year, production of feed grain on such an acreage would total about 118 million tons, about the same as in 1945 when total production was a near-record.

With reduced reserves of grain in prospect and with large livestock and nonfeed requirements, there is needed a large production of feed grain, particularly corn, during 1946 if the present critical supply situation is not to be repeated next year.

REED A. PHILLIPS  
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## Transportation Prospects This Season

LAST fall's expectations of an easing of railroad car shortages and other wartime transportation difficulties by this spring have not been fulfilled as far as the movement of agricultural raw commodities and food-stuffs are concerned. True, there have been more truck tires and parts, and some improvement in the number of new motor trucks available. But the gains have not been enough to offset increased transportation demands and the continuing deterioration of carrier equipment.

In the case of refrigerator cars, for example, the country began the war with approximately 146,000 railroad and privately owned cars, but wartime wear and tear resulted in net retirements of more than 2,000 cars each year since 1941 because it was

not possible to build many new ones during the war. Today there are less than 136,000 cars, including special types not adapted to the protection of fresh fruits and vegetables. And the heavy and continuous use of the remaining ones during the war has brought about serious deterioration, with current manpower and material shortages making prompt repairs a critical problem. A year ago, the number of cars held for repairs on owners' lines or in their shops was about 5,400. At the beginning of last February it was 7,876, but the total number un-serviceable on that date was probably over 10,000 as the number of cars en route to owners' shops or held for light repairs on nonowner railroads are not included in these figures.

Meanwhile, the production of perish-

able commodities, particularly fresh fruits and vegetables, has risen each year since the beginning of the war, and present indications are that 1946 car requirements will run at least as heavy as 1945, with some increase probable.

Although there are about 1,000 new refrigerator cars on order and more in prospect, it is not probable that new equipment will do more than meet the retirement of worn-out cars during the current year. No permanent relief, therefore, may be expected from the refrigerator car shortages of recent months until the basic trouble—lack of an adequate number of useful refrigerator cars—is corrected, or till sufficient refrigerator trucks can be manufactured to handle a portion of the traffic.

A shortage of box cars for the movement of grain, grain products and other nonperishable foods has also seriously hampered the much needed movement of these commodities. The relatively small stocks of grain in public market positions on March 2, 1946, of 124 million bushels compared with 190 million the year before, reflected the lack of cars to move grain from country elevators then. The shortage necessitated preferential treatment recently of box cars used in moving wheat and other food products for export.

Here again, the problem is a smaller number of box cars in service, although in less serious measure than refrigerator cars. But more important than numbers is the fact that, of the cars in service, the proportion suitable for grain and food loading has declined. Although no one knows exactly what proportion of the total box car supply is of the tight, leakproof type required for grain, before the war it was considered to be about 60 percent. During the war, cars were used indiscriminately by heavy industry for the loading of munitions and other freight likely to damage box car linings and floors, and by the first part of 1945 it

is estimated the number suitable for grain was down to approximately 50 percent of the total. In March 1946, it is believed that about 45 percent of the total were suitable, or could be made so with minor repairs and cooping.

Livestock transportation equipment is adequate to meet prospective requirements, particularly in view of current feed shortages and the smaller numbers of livestock expected from farms.

The railroad troubles have not all been because of the smaller number of useful cars in service. Much of the difficulty has been attributed to the widespread adoption of the five-day week in industry, which has slowed the loading and unloading of cars, as well as to absenteeism and labor troubles among railroad employees.

It should not be forgotten that many of the wartime controls requiring maximum loading of cars by shippers, penalty demurrage, limited hold and reconsigning privileges and similar restrictions are still in effect, but are necessary to enable the railroads to handle their present volume of traffic. The end of those restrictions is not in sight.

The motor truck situation is more promising. Production of commercial motor trucks for civilian use, seriously restricted during the war, began to roll in volume last October, and despite labor troubles and material shortages, an average of about 45,000 units a month were produced from October through February. Recent settlement of many major labor disputes may mean a larger output in the months ahead provided further labor troubles do not seriously disrupt the flow of parts and raw materials to truck manufacturers. But it will take time to build up inventories in order to meet requirements fully, particularly in the light and medium truck field most important to agriculture.

Truck-part output generally has been adequate, though battery pro-

duction is barely sufficient to meet minimum needs because of lead shortages. However, this problem is expected to improve. Current truck-tire production is sufficient to meet demand, but there has been little margin, and it will take time to fill inventories to the point where they are in free supply.

Some relief to domestic transportation should be found in the return of coastwise and intercoastal shipping. Plenty of dry cargo ships are available now. While there have been sailings between the east and west coasts for several months and some coastwise services have been resumed on the Pacific, the restoration of Gulf and Atlantic coastwise service has been delayed due to the unwillingness of the operators to undertake operation under present costs because of the losses they fear would result. It has been proposed that these shipping services be begun by the War Shipping Administration, with the private companies operating the ships as agents for WSA. Efforts are being made to work out such an arrangement. Probably some services will be in operation between the Gulf of Mexico and North Atlantic ports by late spring or early summer.

Great Lakes package freight service, discontinued during the war, is expected to be resumed soon. A plan is now under way to operate five vessels between lake ports in the transportation of flour, dairy products and other freight not adapted to movement in bulk cargo ships.

The Great Lakes are very important in the movement of grain from northwest terminals to lower lake ports. Wheat for export will be transferred to rail or barge at these points for movement to North Atlantic ports. Grain transport on the Lakes increased heavily during the war, rising from approximately 114 million bushels in 1941, in vessels of United States registry, to an all-time record of 374 million bushels in 1945. In those years, almost all the United States

grain went into domestic food and feed channels upon arrival at Buffalo and other eastern Lake ports. But this year exports for foreign relief will be an important part of the movement. The prospects are that there will be adequate vessels to meet all needs, and it is probable that the Lake movement will be limited by the amount of grain available at west Lake terminals rather than by vessel space.

One of the most pressing problems in the marketing of food products during the war has been the shortage of almost all kinds of containers. With continuing labor troubles and material shortages, the container situation is about as bad as ever, and there are no indications that it will improve substantially in the near future. Shippers and processors would do well to secure their supplies well in advance of the shipping season.

Storage facilities are generally in better shape to handle new crops than during the war. There should be sufficient dry storage for all purposes, and cooler space in cold storage warehouses is expected to be adequate. Freezer space is tight in some localities and it is assumed that area shortages may be encountered from time to time through the summer months. Improvement in the labor supply for handling stocks in warehouses and smaller amounts of some of the principal commodities in store have eased conditions to large extent. Over all, storage facilities are in a more comfortable position than they have been for several years.

J. C. WINTER, *Marketing Facilities Branch, PMA*



The 1945 rice crop of 70 million bushels set a new production record for the fourth consecutive year, and, with a record-breaking acreage in prospect for 1946, this year's output may be a new high.



# Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) <sup>1</sup>	Income of industrial workers (1935-39 =100) <sup>2</sup>	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities <sup>3</sup>	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities interest and taxes		Dairy products	Poul-try and eggs	Meat ani-mals	All live-stock
1910-14 average.....	58	50	100	100	100	100	100	101	101	101
1915-19 average.....	72	90	158	151	150	148	148	154	163	158
1920-24 average.....	75	122	160	161	173	178	159	163	123	142
1925-29 average.....	98	129	143	155	168	179	160	155	143	154
1930-34 average.....	74	78	107	122	135	115	105	94	85	93
1935-39 average.....	100	100	118	125	128	118	119	109	119	117
1940-44 average.....	192	234	139	150	148	212	162	146	171	164
1945 average.....	203	276	154	180	174	350	197	196	210	203
1945										
March.....	235	322	154	180	173	-----	198	175	211	200
April.....	230	314	154	180	173	335	194	176	215	201
May.....	225	302	155	180	173	-----	192	179	217	202
June.....	220	301	155	180	173	340	191	189	216	203
July.....	211	297	155	180	173	362	192	197	215	205
August.....	187	260	154	180	173	-----	195	207	212	206
September.....	170	222	154	181	174	-----	197	201	207	203
October.....	163	215	155	182	175	355	199	204	202	202
November.....	168	220	156	182	175	-----	202	218	203	206
December.....	163	223	156	183	176	-----	204	222	204	207
1946										
January.....	160	225	156	184	177	347	203	197	206	204
February.....	154	-----	157	185	178	-----	202	188	214	202
March.....	-----	-----	-----	186	179	-----	201	187	219	203

Year and month	Index of prices received by farmers (August 1909-July 1914=100)									Parity ratio <sup>1</sup>
	Crops								All crops and live-stock	
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1910-14 average.....	100	101	102	96	98	99	-----	99	100	100
1915-19 average.....	193	164	187	168	187	125	-----	168	162	106
1920-24 average.....	147	126	192	189	149	148	6 143	160	151	86
1925-29 average.....	140	119	172	145	129	141	140	143	149	89
1930-34 average.....	70	76	119	74	72	94	106	86	90	66
1935-39 average.....	94	95	175	83	106	83	102	97	107	84
1940-44 average.....	123	119	245	131	159	133	172	143	154	103
1945 average.....	172	161	366	171	215	220	224	201	202	116
1945										
March.....	171	166	359	163	215	211	203	196	198	114
April.....	172	162	362	163	215	221	259	204	203	117
May.....	172	161	363	165	216	227	193	198	280	116
June.....	173	162	364	169	217	237	269	210	206	119
July.....	169	161	364	171	221	237	244	207	206	119
August.....	167	158	367	172	215	214	240	202	204	118
September.....	167	157	365	175	213	217	189	191	197	113
October.....	175	160	373	180	210	219	181	196	199	114
November.....	178	161	375	182	213	217	235	203	205	117
December.....	178	162	373	184	213	230	223	206	207	118
1946										
January.....	179	164	375	180	213	225	249	207	206	116
February.....	180	166	368	186	212	233	275	213	207	116
March.....	185	171	367	183	208	229	283	215	209	117

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation.

<sup>2</sup> Total income adjusted for seasonal variation, revised September 1945.

<sup>3</sup> Bureau of Labor Statistics.

<sup>4</sup> Revised.

<sup>5</sup> Ratio of prices received by farmers to prices paid, interest, and taxes.

<sup>6</sup> 1924 only.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.

# THE AGRICULTURAL • SITUATION •

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## Commodity Reviews

### FOOD SUPPLIES

THIS year's food supplies for the people of the United States are among the most plentiful in over a quarter of a century—only slightly below the all-time record in 1944. Measured on a per-capita basis, civilian consumption in 1946 is now expected to be 10 to 12 percent above the 1935-39 average. Some 3,300 calories per person per day will be available in 1946, compared with a rough average requirement for the United States population of 2,800 calories including moderate kitchen waste. And these ample food supplies take into account present export commitments of wheat, fats, meat, sugar, and dairy products for foreign-relief purposes.

In contrast to the plentiful supplies in this country, the per-capita world

supply of food in general will average about 15 percent *below* prewar levels. In Europe the per-capita supply is 20 percent below prewar, with wheat stocks a third smaller than prewar levels. In China, India, and other Asiatic countries, food shortages are acute, with the per-capita supply in many reduced far below prewar levels.

Causes of the world food crisis, in Europe and Asia the worst crisis since the devastation following in the wake of Genghis Khan who tried to conquer the world in the 13th century, are manifold. War-disrupted transportation facilities, particularly in many industrial countries, make the difficulties all the more acute. And then added to these critical problems is the meager production in several important food producing countries during the past year or two, largely the result

of drought and other natural causes. Europe, North Africa, and the Southern Hemisphere have had extremely short wheat crops, the Far East small rice crops, and the world generally has had a drastically reduced production of fats, oils, meats, and sugar.

Even with large shipments of grain and other foods from countries having surpluses for export, a half billion people in Europe, India, China and other countries face increasingly serious food shortages at least till this year's crops are harvested. And the food crisis is likely to continue to be acute in many areas well into 1947. Scarcities of seed, fertilizer, farm machinery, and draft animals darken the prospects for the critically needed bountiful harvest this year in many war-torn regions. Thus large food imports for relief purposes in many countries are in prospect for 1947.

The foodstuffs most urgently needed now are cereals, fats, oils, meats, and sugar. Without them millions of people will starve or be deformed by prolonged hunger. If extreme hunger is allowed to persist or spread, it will increase the size of occupation forces required in Axis countries and may weaken or overthrow the governments of many of the United Nations.

## WHEAT

**W**HEAT moved from farms at a record rate during the first quarter of this year and by April 1—date of the latest quarterly report—farm stocks were the smallest since 1941 despite the record wheat crop last year.

Several new measures were put into effect in April in an effort to get every bushel possible off of farms before the new crop is harvested, and so reduce the number of people in Europe and Asia who will die of starvation this spring. Most important of these measures are the 30-cent-a-bushel bonus on wheat delivered to the Government by May 25, and the limitation of use of wheat for food in this country to

75 percent of the amount available at this time last year. If these measures are successful in meeting this country's promises to help reduce starvation, they will pull down the July 1 wheat carry-over in this country to less than 100 million bushels.

Wheat farmers probably will start harvesting earlier than usual this year because of the warm weather in early spring in the main wheat areas. And the 1946 crop may be the fourth in history to exceed a billion bushels. But the crop cannot be too large to meet needs for food throughout the world.

Wheat-harvesting operations in general may be less tight than during the war. Farmers now have more combines than in any previous year. On January 1, 1945, there were nearly 330,000 on farms, with three-quarters bought after 1939, and more combines were manufactured from last July to March of this year than for the same period in any recent year. Production since March 1, however, has been drastically curtailed because of material shortages and labor difficulties. Though most farmers have fewer horses and mules there are more tractors on farms than ever before so that ample drawbar power is expected to be available for this year's wheat crop.

Harvest labor is likely to be a little more plentiful than in 1945, but wheat producers will probably have to pay higher wages than last season. Seasonal laborers are showing up earlier and in larger numbers than last year. Veterans are beginning to return to wheat farms, some as operating partners or managers and some as laborers. As they will tend to replace older and less able-bodied workers, wheat producers should find some improvement in harvest output per worker.

## LIVESTOCK

**C**ATTLEMEN, both on the range and in feedlots, will continue to market large numbers of animals this year, but total slaughter in 1946

may fall below the record 1945 output. Cattle have been going through Federally inspected slaughter in much smaller numbers than last year, but noninspected slaughter has been large.

Corn Belt cattlemen, faced with relatively high prices for feeder cattle together with higher feed costs and soft corn problems, had reduced the number of cattle in feed lots by April 1 to 17 percent below a year earlier. Because of this reduced number as well as feed shortages, feeders will sell considerably fewer feed cattle during the balance of 1946 than they did a year ago.

Farmers are now marketing some 12 percent more hogs, from their fall pig crop, than they did in 1945. This increase, plus present prospects favoring earlier marketings and lighter weights than last year, should keep hog marketings above 1945 during all of 1946.

Sheep ranchers and feeders will operate at levels this year well below those of 1945 chiefly because of the sharp decline in last year's lamb crop. Lamb production and slaughter both will be smaller during the balance of 1946 than a year earlier.

Farmers may delay putting cattle on feed and may plan a smaller fall pig crop because of the prospects of very low feed inventories this summer and early fall. Furthermore the fall and winter operations will depend more than in recent years on the outcome of this season's feed crops and the size of feed inventories after harvest. Grain production is now expected to be large but the output of high-protein feeds may be smaller than last year as indicated by prospective acreage plantings of soybeans 12 percent smaller than last year and peanuts 5 percent smaller.

Although livestock producers are expected to keep 1946 meat production close to the near-record output of 1945, supplies are now believed to be 15 to 20 percent less than demand at present prices. Thus meat animal prices to

producers for the remainder of 1946 are not expected to fall off from current high levels.

Relief shipments have been the largest proportion of United States meat exports to Europe, though commercial shipments to France, United Kingdom, Belgium, and the Netherlands have been sizable. Total exports this year are expected to be larger than in 1945.

## DAIRY PRODUCTS

**D**AIRYMEN are continuing to feed their cows at very heavy rates, despite difficulty in obtaining feed, and many have been able to use pastures much earlier than usual. As a result, average milk production per cow on April 1 was a new high for that date. But total milk production was and is expected to continue below last year's record level because there are fewer milk cows on farms. Some producers will continue to have difficulty in obtaining all the concentrates they want, at least till new crop grain becomes available. However, dairy farms generally are not likely to cull their herds any more heavily than last year.

Feed prices for the balance of 1946 will average higher than a year earlier, but should be offset by bigger milk checks, either from larger subsidy payments or increased prices for dairy products.

Farmers will continue to have some difficulty in getting all the labor they need, but present prospects point to some easing in last year's tight supply situation.

Milk producers should have no difficulty in marketing all their milk at good prices even during the flush production season. Total demand for milk will be at a high level throughout 1946. In the coming weeks producers will come closer to meeting the civilian demand for fluid milk than they have for some time, but will still fall short of the demand for butter.

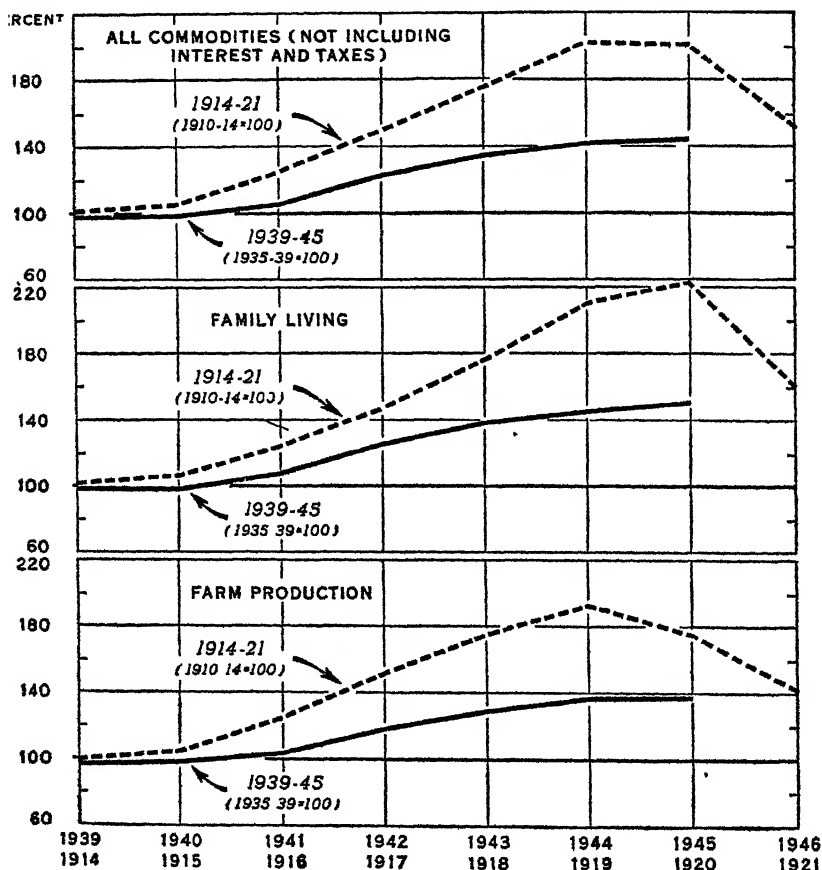
# Prices Paid by Farmers During Two Wars

**S**HARP wartime price rises continuing into the period immediately afterwards then followed by a drastic slump, has been the pattern during and after every major American war. But during World War II, Government measures to prevent inflation and its attendant evils have been and are now being given a trial in the United States for the first time in history. What, then, happened to local market prices, particularly prices

paid by farmers during the war just ended and during World War I?

To begin with, the prices farmers pay for the things they buy are generally more stable than the prices they receive for the things they sell. From 1914 to 1919 and from 1939 to 1945, the general level of prices received by farmers increased about the same—113 percent. In contrast, the index of prices paid by farmers for commodities, interest and taxes, gen-

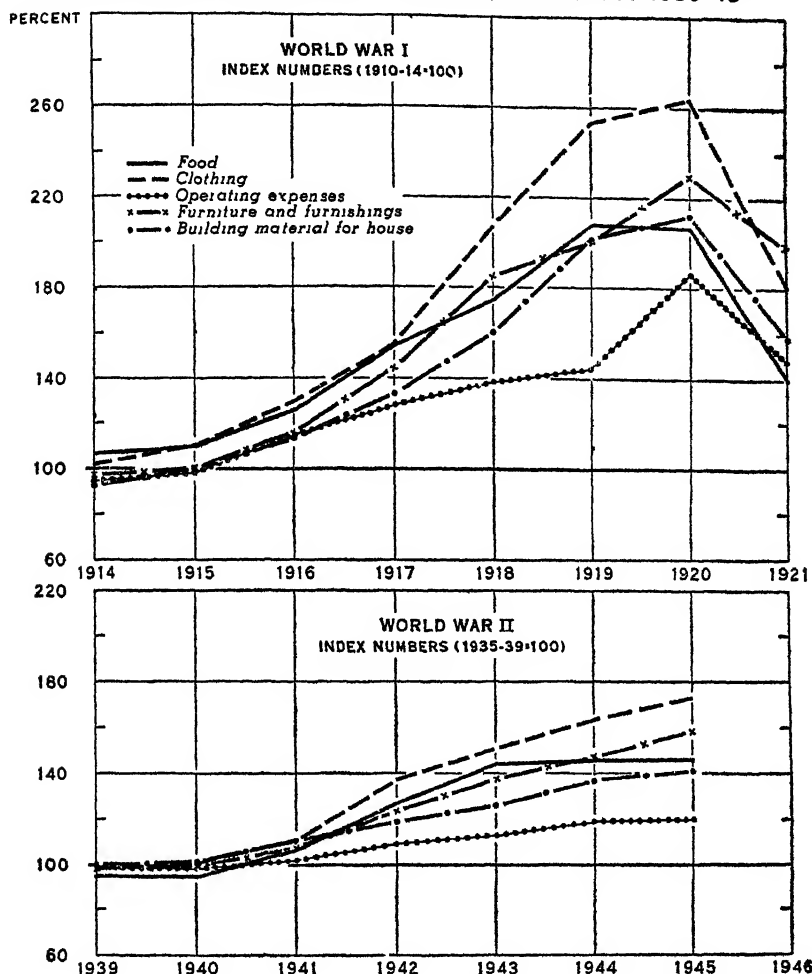
**PRICES PAID BY FARMERS FOR ALL COMMODITIES, FOR FAMILY LIVING, AND FOR FARM PRODUCTION, UNITED STATES, 1914-21 AND 1939-45**



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**PRICES PAID BY FARMERS FOR GROUPS OF COMMODITIES USED  
FOR FAMILY LIVING, UNITED STATES, 1914-21 AND 1939-45**



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erally called the parity index, rose 98 percent from 1914 to the peak in 1920, and only 40 percent from 1939 to 1945.

Relatively greater increases in prices received than in prices paid raised the ratio of prices received to prices paid (the parity ratio) to 118 in 1917, using 1910-14 as the base period. In other words, the purchasing power of farm products, with respect to prices paid

for commodities, and interest and taxes payable per acre was 18 percent greater in 1917 than in 1910-14. After dropping below 100 in 1920 and continuing below parity till 1942, the parity ratio reached a World War II peak of 23 percent above parity in April 1943 and is still well above, averaging 16 percent higher during 1945 and the first quarter of 1946.

Prices paid by farmers for commodi-

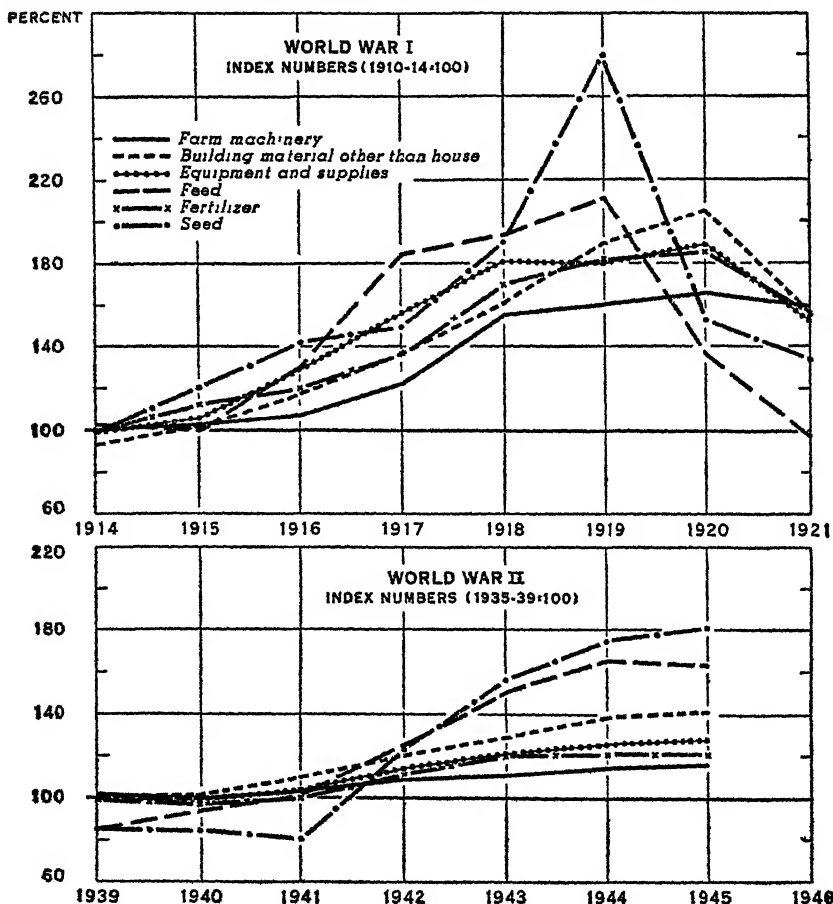
ties, which make up about six-sevenths of the parity index, increased less than half as much during the second World War as during the first. From 1939 to 1945 they increased 49 percent compared to 102 percent from 1914 to 1919. And despite the fact that the level of commodity prices at the beginning of World War II was 21 percent higher than at the beginning of the first war, in 1945 it was 11 percent below the peak reached in 1919. Price control programs, practically nonexistent during the first war, are

largely responsible for the smaller increase so far during the second period.

Prices farmers paid for commodities used for family living increased more during both war periods than did prices they paid for commodities used in farm production. The greater increase in the family living price level largely results from a lack of standardization of clothing and other items used in the home, making it more difficult to control prices for such items.

During both war periods price increases among the family living com-

### PRICES PAID BY FARMERS FOR GROUPS OF COMMODITIES USED FOR FARM PRODUCTION, UNITED STATES, 1914-21 AND 1939-45



modities were greatest for clothing and furniture, but lowest for operating expenses (fuel, toilet goods, laundry articles, motor supplies, etc.). Food ranked third in amount of increase from 1939 to 1945 and also from 1914 to 1919, but declined slightly in 1920 while building material prices continued to rise. By 1921 prices for all these commodities had dropped sharply.

Great similarity in the price rises during the two war periods is also very evident among the groups of commodities used in farm production, though the advances were substantially greater during the first. During both periods seed prices advanced the most, with prices for feed, building materials, equipment and supplies, fertilizer and farm machinery increasing less, in the order named. Here, again, the last three groups of commodities are more standardized and their prices held much better under the price control program.

The year-to-year changes in prices of some of the farm production commodities varied during the two war periods. Practically every group showed sizable price increases from 1914 to 1916 whereas price advances from 1939 to 1941 were relatively small, with seed prices declining in

1941. In the first war, seed and feed prices reached their peak in 1919 and dropped sharply in 1920, while other groups continued to rise in 1920 and did not drop till 1921. In the second war feed prices averaged slightly less in 1945 than in 1944 while fertilizer prices continued at the same level for both years. Prices of all other farm production commodities continued to rise from 1941 to 1945.

About one-fourth of the increase in prices paid by farmers during the first war period occurred after the end of hostilities late in 1918. Currently the supply of clothing, machinery and other items used by farmers is not sufficient to meet the demand at ceiling prices. As a result any revision of price controls to hasten conversion of some industries to a peacetime basis or to increase production of other industries is likely to cause further price increases for the products of these industries. So far since the second war ended the index of prices paid by farmers for commodities has increased at a rate of about a point a month, from 180 percent (of the 1910-14 average) last August to 188 percent in April 1946.

RONALD E. JOHNSON

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## Farm Output: War Record and Future

**D**URING the war new production records were established for nearly all crop and livestock enterprises in the United States. At the end of each year after 1941, more milk, more meat, more poultry, more eggs, more soybeans, more peanuts, more beans, more peas—in short, more total food—was produced than in any of the last five prewar years. By 1944, and again in 1945, farm output was nearly 30 percent more than the 1935-39 prewar average and one-half more than in

1919, the first full peace year after World War I.

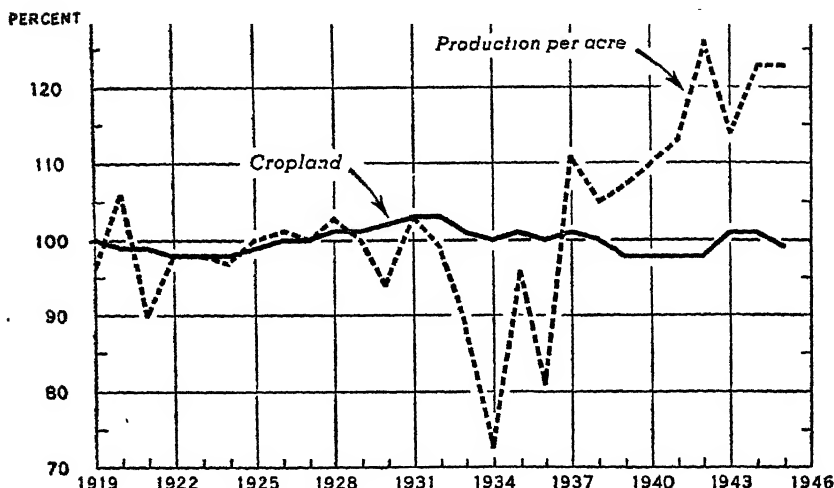
This production record is even more remarkable when measured in terms of crop acreages and number of farm workers. There were about the same number of acres in cropland as before the war and during the first world war. By the end of this war there were about ten percent fewer farm workers than before the war and at the end of hostilities farm output per worker was 40 percent more than in 1935-39, yet an increasing proportion of the farm labor force was made up of women, children, and older men as the war progressed.

NOTE.—This summary is based on the recent BAE report *Farm Production in War and Peace* prepared by the author and Martin R. Cooper.—Editor.



# TOTAL CROPLAND, AND CROP PRODUCTION PER ACRE, UNITED STATES, 1919-45\*

INDEX NUMBERS (1935-39=100)



DATA FOR 1944 AND 1945 ARE PRELIMINARY  
\* TOTAL CROPLAND IS THE SUM OF THE ESTIMATED ACREAGE OF LAND FROM WHICH ONE OR MORE CROPS WERE HARVESTED PLUS ESTIMATED CROP FAILURE AND SUMMER FALLOW ACREAGE.

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About half of the expanded wartime output resulted directly from increased crop production per acre, and the increase in feed grain and hay yields was the chief factor permitting the phenomenal expansion in livestock production. While total land used for crops increased very little during the war period, crop production per acre jumped almost a fourth.

The single most important factor causing the increased war production was favorable weather which not only increased yields but also reduced the acreage of crop failures. But, after allowing for both direct and indirect effects on production of crops and livestock, it is safe to conclude that not over 25 to 30 percent of the total production increase can be attributed to the favorable wartime weather. Thus, two-thirds to three-fourths of the increase was the result of man-controlled and technological factors. And these gains cannot only be made permanent but can be increased in the years ahead.

Chief among the man-controlled factors causing the expanded wartime crop production was the increased use of fertilizer and lime. The combined effects of the wider use of improved varieties of seed such as hybrid corn, and the benefits from soil improvement practices about equalled the importance of fertilizer and lime.

The expanded livestock production was made possible largely by greatly increased feed and hay yields, extensive use of prewar feed reserves and substantial feed imports. In addition, the continuing downward trend in horse and mule numbers during the war released significant quantities of feed and pasture and made possible further expansion in livestock production for human use.

Mechanization was stimulated during the war and helped hold the increase in man-hour labor requirements of farm production to less than 5 percent above prewar, by decreasing the labor requirements per unit of production. Numbers of many labor-

saving machines increased during the war and fuller use was made of all labor-saving machines. Increased crop production per acre was responsible for much of the decrease in unit labor requirements. Greater yields add little to preharvest labor requirements, and harvest labor requirements of many crops are not increased proportionately when yields increase. Also shifts to less labor-intensive crop and livestock enterprises and labor economies resulting from larger operations contributed to reduced man-hour requirements per unit of production.

But even so, fewer and less physically capable workers had a larger wartime job to do on farms. This meant more hours per day, more days per week and more weeks per year for regular workers, and more complete and efficient use of seasonal workers. And some farm tasks were slighted or eliminated.

Had more labor been available on farms, many critical jobs could have been done at the most opportune time resulting in even greater production.

With wartime restrictions removed, farm production for human use is

likely to continue its increase stimulated by the war and could easily be 10 percent greater a decade hence, assuming average weather, reasonably full employment, and adequate market outlets.

Some net increase in cropland through irrigation, drainage and clearing of new land is highly probable. Continued increases in crop production per acre seem likely, through further development and use of better crop varieties as well as increased use of fertilizer and lime. Livestock production for human use will increase through a continuation of better breeding, reduced death losses, and a continued diversion of feed as horse and mule numbers decline.

Further mechanization and other labor-saving technological gains are practically certain, thus continuing the long-time downward trend in farm employment. But, with increases in farm worker efficiency and with a larger proportion of able-bodied workers than in recent years, farm families will not have to work as hard or long as they did during the war.

GLEN T. BARTON

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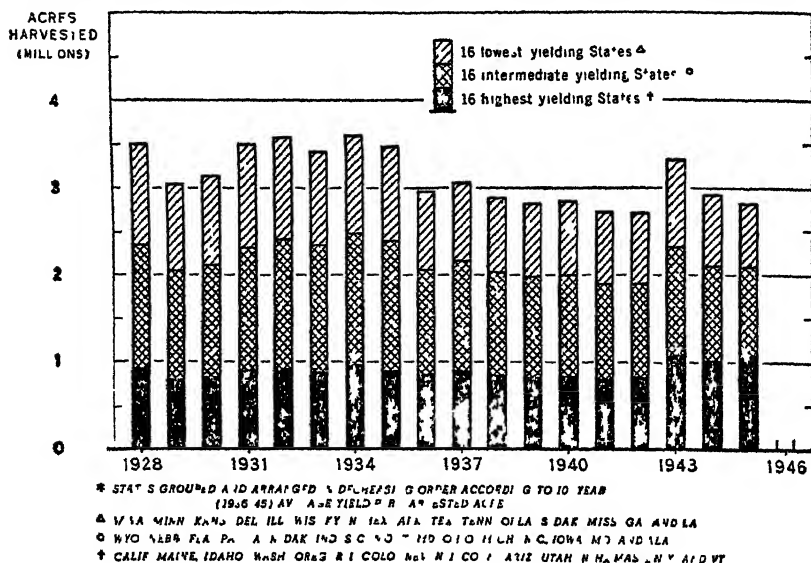
## Changes in Potato Acreages

**L**AST year's potato crop of 425 million bushels has been exceeded only twice, 427 million bushels in 1928 and 465 million in 1943. But the 1945 crop was produced on only four-fifths the 1928 acreage, yet the production was nearly as much. The reason lies in the 1945 yield of 150.6 bushels per acre, a record high.

During the past two decades potato yields have been steadily increasing, partly the result of greater use of fertilizer, wider use of higher yielding varieties of seed, improved cultural practices, and partly the result of significant acreage shifts to higher-yielding commercial production areas. And this acreage shift was accentuated during the war.

In an attempt to visualize the extent of these acreage shifts the States can be classified in three groups of 16 States each, one group being the highest yielding States, the second being the intermediate yielding and the third the lowest yielding, all based on 10-year (1936-45) average yields. Because potatoes grow best where summer temperatures are relatively low and where the water supply is sufficient to keep the plants in active growth throughout the season, the highest yielding States are located in the northeastern and western parts of the country. The accompanying charts show the changes in acreage and production from 1928 to 1945 in the three groups of States.

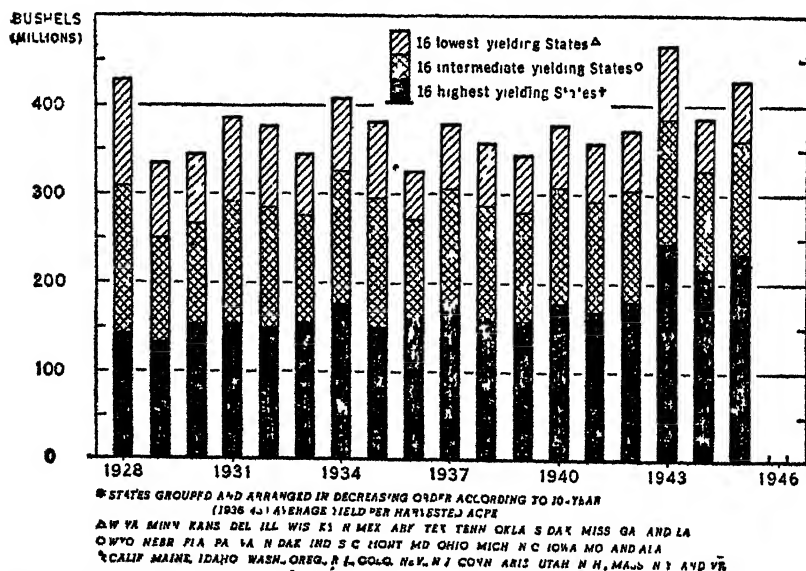
# ACREAGE OF POTATOES HARVESTED, 1928-45, UNITED STATES AND 16 HIGHEST, INTERMEDIATE, AND LOWEST-YIELDING GROUPS\* OF STATES



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# PRODUCTION OF POTATOES, 1928-45, UNITED STATES AND 16 HIGHEST, INTERMEDIATE, AND LOWEST-YIELDING GROUPS\* OF STATES



U. S. DEPARTMENT OF AGRICULTURE

NEG. 45908 BUREAU OF AGRICULTURAL ECONOMICS

Although the total potato acreage for the Nation has been declining since 1928, there are definite upward trends in 10 out of the 16 highest yielding States. And outside this group, acreage trends are definitely upward in North Dakota, Alabama, Texas, Mississippi, Georgia, Arkansas and Louisiana.

The increase in the North Dakota acreage is largely in the three Red River Valley counties of Walsh, Pembina and Grand Forks, where the 1944 acreage was almost equal to the total State acreage in 1928 and the production was about a third larger. Most of the increased Alabama plantings are in Baldwin County where an early commercial crop is produced, and part of the increase in Texas is in the Panhandle where commercial production for summer harvest began in 1939.

With the acreage under irrigation, Kern County, California, has witnessed one of the most important potato developments in recent years. The 2,000 acres there in 1929 increased to 55,000 in 1945, and the 1944 output for the county exceeded the total production of each State, except California, Maine, New York, North Dakota, Idaho, and Colorado. Increased plantings in Maine have generally been in Aroostock County—a county which normally produces more potatoes than any State does, except Maine. The

acreage in the high-yielding Klamath basin of Oregon and northern California increased from about 6,000 acres in 1929 to about 26,000 in 1944.

Significant acreage shifts to higher yielding areas have taken place within certain States which have had total acreage declines since 1928. For example, all of the acreage decrease in New York has been up-state, while Long Island, with twice the up-state yields, has had a steady increase in recent years. In 1945 about 40 percent of the State acreage was on Long Island compared with only 18 percent in 1933. Likewise in Nebraska where the total State acreage has been declining sharply, the 1944 acreage in the important Scotts Bluff County was twice the 1929 acreage. Also, in Minnesota about a third of the 1929 acreage was in the Red River Valley, but about half in 1945, yet the total acreage for the State has been declining.

Potato acreages planned for 1946, according to farmers' March 1 intentions, are indicated to be only 2,738,300 acres, the smallest acreage since 1893. But, if average growing conditions prevail and these intentions materialize, a crop between 385 and 390 million bushels is likely, which would be well above the 1934-43 average of 375 million bushels.

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## World Competition in Vegetable Oils

**T**HE current world-wide food shortage has tended to obscure the long-time outlook for fats and oils. At the end of hostilities it was generally believed that in a relatively short time low cost vegetable oils from the Philippines, the Netherlands East Indies, Malaya, and other exporting areas would be arriving in the United States and Europe in considerable volume.

NOTE.—This article is a summary of the report, *World Trends in Major Oil Crops*, prepared by the author and recently issued by BAE.—Editor.

However, the recovery in production, processing facilities, and transportation has been slower than was anticipated, even though the long run situation has not been materially affected by present difficulties.

Many of the countries which were heavy exporters of vegetable oil crops before the war may be expected to re-enter the world market with their surplus production during the next few years. The two regions that furnished most of the international competition

# Average Yield per Acre of Vegetable Oil from Selected Crops in Specified Areas

Crop	Year	Country or area	Total area in production	Oil yield per acre
			<i>Acres</i>	<i>Pounds</i>
Palm <sup>1</sup> .....	1936	Netherlands East Indies .....	167,714	2,513
Coconuts .....	1932	Philippine Islands .....	924,000	730
Soy beans .....	1944	Illinois .....	3,470,000	149
Peanuts .....	1942	North Carolina.....	270,000	337

<sup>1</sup> The oil palm is at least five years of age and the coconut palm eight years before the production is of commercial importance.

<sup>2</sup> Includes 200 pounds of palm kernel oil.

<sup>3</sup> Only the area of trees in bearing was used in arriving at this average yield. Individual plantation yields of as much as 1200-1400 pounds of oil per acre are not unusual.

before the war were Southeast Asia, and West and Central Africa. Southeast Asia includes principally the Philippines, the Netherlands East Indies and Malaya while West and Central Africa is made up of French, British and Belgian colonies. These two regions supplied more than 80 percent of the increase in the world's net export of vegetable oils between the two five-year periods 1924-28 and 1934-38. They are tropical and appear to have both an absolute and a comparative advantage over the temperate zones in the production of vegetable oils. The yields per acre are very high under the plantation system. Some of the advantages gained through high yields are offset by the cost of transporting the oils to the consuming centers, and by other factors. But even so, palm oil and coconut oil appear to be produced at very great advantage, as indicated in the table.

The production of vegetable oils in the tropics seems capable of much further expansion. This is particularly true of the plantation production system, and practices among the small scale native producers also could be greatly improved.

Despite the inadequacy of available data regarding oil crop production in a number of countries, the world production of the principal vegetable oil crops is estimated to have averaged about 15 million metric tons annually in terms of oil equivalent during the 5-year period 1934-38. Of this production about 30 percent entered world trade.

Among the most prominent of the vegetable oil crops in international trade when measured in terms of oil equivalent were coconut products (with about one-fourth of the total), palm oil, palm kernel oil, peanuts and flaxseed. The last four provided about one-half of the vegetable oil equivalent, which in one form or another entered world trade.

In the accompanying chart average annual production and net export in terms of oil equivalent for several leading oil crops are shown for the five-year period 1934-38, and a projection of the export for a year about 1955 has been indicated for each crop.

The projected data for 1955 are, of course, subject to many uncertainties. They are based on relatively favorable assumptions regarding world prosperity and employment as well as greater freedom of international trade than existed before the war. The estimated increase in the world production of the principal oil crops in 1955 over 1934-38 is about 16 percent, or nearly 2,500 thousand metric tons. The estimated increase in net export is about 21 percent or about 900 thousand metric tons. Both estimates are conservative as compared with the estimated increases of 17 percent in production and 23 percent in net export between the two five-year periods 1924-28 to 1934-38, especially when it is considered that world population has been increasing by about 0.75 percent annually.

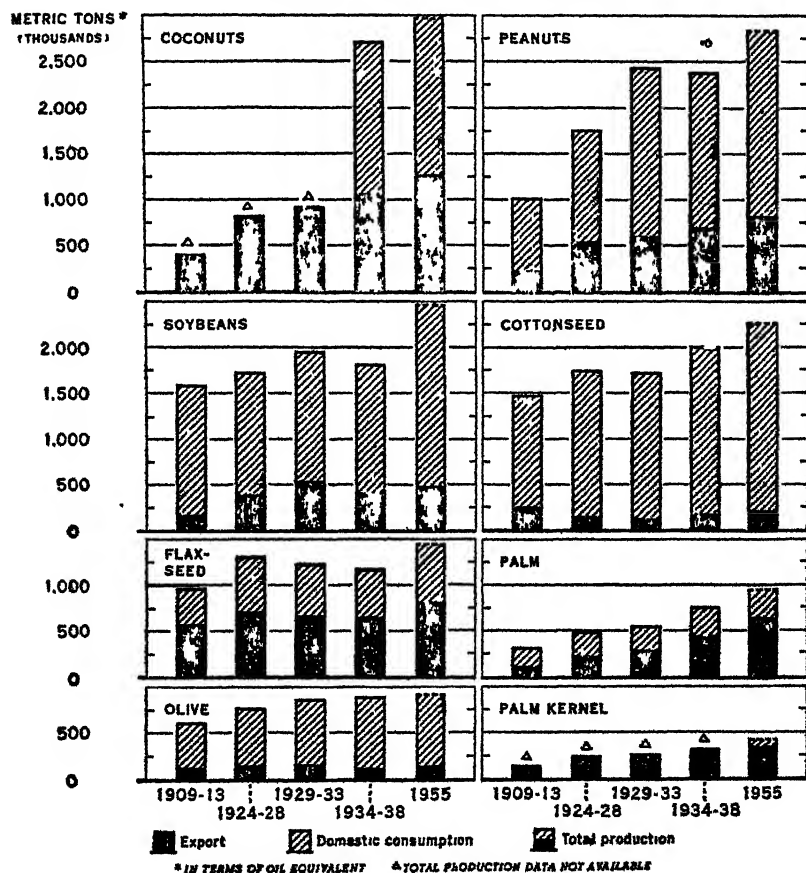
What does an expanded world production of vegetable oils mean to the

United States? If the conversion from war to peace is reasonably prompt around the world and if peaceful relations and a reasonable movement of trade among nations develops, it is quite possible that a very large output of vegetable oils will be needed and consumed even during the next few years when the European buying power will be below prewar levels. The world's population is still growing and many signs point to rapid economic progress in some of the less developed areas of the world. A rising level of living in China, India and the

Soviet Union could bring the consumption of vegetable oils in these countries far above prewar levels. Accordingly, an increase of 21 percent in net world export of vegetable oils over the 1934-38 level by 1955 may be well within the world's consuming capacity.

The average world prices of the vegetable oils may fall somewhat below present levels as the relative proportion of tropical oils entering world trade continues to rise. Such an increase in international trade accompanied as it is likely to be by a

### AVERAGE PRODUCTION AND NET EXPORT OF EIGHT MAJOR OIL CROPS FROM LEADING PRODUCING COUNTRIES FOR SELECTED PERIODS AND AN ESTIMATE FOR A YEAR ABOUT 1955



rising level of world prosperity and by a high level of employment in the industrialized countries might result in a relatively lower production of vegetable oils in the United States and other countries with temperate climates where greater emphasis would be placed on beef, pork and dairy production—lines of production in which the American and North European farmers hold a comparative advantage which is particularly effective at

high levels of prosperity and employment. Moreover, this would conform with the desired improvement in food habits from the standpoint of a higher nutritional level and with the need for a decrease in intertilled crops in order to conserve agricultural resources.

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## Strawberry Production Trends

THE March sun had set on the little town of Hammond, Louisiana—strawberry capital of the world—and everyone seemed drawn to the Log Cabin, as if by a magnet. Throughout the day, all up and down the hue—Ponchatoula, Hammond, Independence, Tickfaw, Amite, Abbeville, Denham Springs, Gonzales—the question had been, "Will the first car roll tonight?" And now that the car was loaded and speeding northward, growers, shippers, buyers and plain spectators moved en masse to the Log Cabin, where the carlot was to be auctioned.

As the crowd milled around, the auctioneer mounted the platform and gave a few tentative clants, or calls, to draw attention. Buyers, from all important consuming markets, took their seats and the auctioneer carefully described the car to be sold, from information furnished by the shipper, as to the car number, the number of crates, the brand, the Government grade, etc. After spirited bidding on the part of the competing buyers, the car was announced as sold. The 34 million dollar strawberry industry of the Nation was well started on another season.

True, a few thousand crates had already moved from Florida during the winter months, but the opening of the March auctions in Louisiana—the only carlot auctions of strawberries in the world—heralds the beginning

of more plentiful supplies throughout spring and early summer.

Fresh strawberries usually are available from December to July, with May the big month. Shipments from Florida, the only State having a winter commercial crop, start in December and continue into April, with January, February and March usually supplying the largest amount. There has been a downward trend in Florida acreage since the peak of 10,600 acres was reached in 1933, and by 1944 only 1,400 acres were harvested. There was some recovery in 1945 and 1946, but it seems very doubtful that the crop will regain the prewar level.

Early spring strawberries, principally from Louisiana, are available from about mid-March until mid-May, with the bulk of the crop harvested in April. This early spring crop group accounted for nearly a fifth of the total prewar average acreage for the year and a slightly larger proportion of production. During the war, acreage was reduced substantially, but since plants in Louisiana are set annually in the fall for the next spring's crop, growers were able to bring the 1946 acreage up to 17,900 acres, only 2,000 acres under the prewar average. A good crop is expected this spring.

In May, the big mid-spring crop goes to market. On an average, nearly a half of the total acreage for the year is grown for mid-spring

harvest. Tennessee and Arkansas are the leading producers in this group but Kentucky, Virginia, Maryland, North Carolina, Missouri, Illinois, Delaware and California also have had substantial acreages. As in the other groups, acreage was reduced greatly during the war years, but growers have planned considerable new acreage, a part of which will come into bearing in 1946.

Approximately 30 percent of the annual acreage has been grown in late spring areas, with Oregon, Washington, and Michigan the principal contributors. June is the month of most active harvest. Although acreage reductions from the prewar average have not been so great for this group as a whole as for the other seasonal groups, nevertheless the acreage is considerably below average. Some increase is expected in 1946 and the 1947 acreage probably will show a further expansion.

The strawberry, native to North America, is like some other American crops, having travelled to Europe and finally returned home. It is now grown in every State in the United States and in every foreign country having a temperate climate. The present day cultivated strawberry originated from two American species, one native to eastern North America and the other to the Pacific Coast. Plant breeders have developed firm varieties adapted to widely different conditions. Today the strawberry will grow from sea level up to more than two-mile elevations in humid and dry regions. The fruit matures at a time when few other fresh fruits are available. These factors account for the world wide distribution of the strawberry.

In the United States some 30-odd varieties are grown but 6 comprise about nine-tenths of the acreage. Blakemore is the leading variety, followed by Howard 17 (Premier), Marshall, Klommore, Klondike, and Aroma. Most of these varieties have been introduced during the past 55 years. Breeders continue their re-

search in an effort to develop varieties with greater resistance to disease and adverse weather, and with better quality under adverse conditions.

At the conclusion of World War I, about 65,000 acres were devoted to commercial strawberry production in the United States. Thereafter, acreage was expanded rapidly, reaching a peak of 204,000 acres in 1928 and 1929. Following relatively low prices for the large crops of those 2 years, acreage was reduced in 1930 and 1931, but rose to nearly 200,000 acres annually for 1932-34, inclusive. Disastrously low prices in 1932, 1933, and 1934 discouraged growers and by 1937 acreage had dropped to less than 150,000 acres. From that time until 1941 an increase occurred each year, with about 180,000 acres picked in that year.

Labor difficulties attending the recent war brought about sharp acreage reductions and by 1944 the level was below 100,000 acres, the lowest of record. It appears now that 1946 acreage will be expanded considerably though much below the prewar average. With the high prices received for the short crops of recent years, further expansion may be expected.

Although yields per acre have shown considerable variation between years—ranging from a low of 51 crates (24-quart) in 1930 to a high of 81 crates in 1942, no consistent trend upward or downward is apparent, and the long-time production pattern has tended to follow that of the acreage. Prices generally conform to the usual behavior of prices for agricultural products—high for small crops and low for large—with the increases during the past few years being accentuated by a strong wartime demand. Value of the crop rose from about 28 million dollars in 1918 to 45 million in 1927, dropped to a low of 21 million in 1933, and then increased to a high of about 47½ million dollars in 1943.

CLARENCE O. PARKER  
*Bureau of Agricultural Economics*



# Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Apr. 15, 1945	Mar. 15, 1946	Apr. 15, 1946	Parity price Apr. 15, 1946
	August 1940- July 1944	January 1937- December 1939				
Wheat (bushel).....dollars	0.884	0.837	1.40	1.58	1.58	1.60
Rice (bushel).....do	0.813	0.742	1.80	1.80	1.80	1.47
Corn (bushel).....do	0.642	0.611	1.07	1.14	1.16	1.16
Oats (bushel).....do	0.319	0.310	.710	.751	.761	.722
Hay (ton).....do	11.57	8.87	16.10	16.30	15.00	21.60
Cotton (pound).....cents	12.1	10.34	20.20	22.70	23.59	22.44
Soybeans (bushel).....dollars	2.066	0.174	2.13	2.12	2.14	1.74
Peanuts (pound).....cents	4.8	3.25	8.24	8.03	8.09	8.69
Potatoes (bushel).....dollars	0.197	0.177	1.75	1.67	1.62	1.32
Apples (bushel).....do	0.665	0.60	2.53	3.68	3.61	1.74
Oranges on tree, per box.....do	41.5	1.11	2.54	2.21	2.19	2.14
Hoes (hundredweight).....do	7.27	8.38	14.10	14.20	14.20	13.30
Beef cattle (hundredweight).....do	5.12	6.06	13.10	13.10	13.70	9.81
Ven calves (hundredweight).....do	6.75	7.80	13.60	14.10	14.30	12.20
Lambs (hundredweight).....do	5.68	7.70	13.00	13.00	14.00	10.60
Butterfat (pound).....cents	23.5	24.1	50.5	51.2	51.1	47.1
Milk, wholesale (100-pound).....dollars	1.40	1.61	3.12	3.29	3.23	2.72
Chickens (pound).....cents	11.4	14.9	25.7	23.3	24.3	20.6
Eggs (dozen).....do	21.5	21.7	33.0	32.1	31.3	32.7
Wool (pound).....do	18.3	23.8	40.7	40.7	41.4	33.1

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1900-July 1914.

<sup>3</sup> Comparable price computed under section 8 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1916-July 1929.

<sup>5</sup> Does not include dairy production payments made directly to farmers by county AAA offices.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

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BUREAU OF AGRICULTURAL ECONOMICS  
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# The AGRICULTURAL SITUATION

Bureau of Agricultural Economics • U. S. DEPARTMENT OF AGRICULTURE  
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## 1947 Goals Ask Top Farm Output

PRODUCTION goals for 1947 call for another year of high output near wartime levels. These are of large production, justified by anticipated needs. From the standpoint of proper land use and conservation however the 1947 level is higher than is permanent, desirable and means a delay in restoring a better balance between soil depletion and soil conserving crops.

In recognition of the heavy drain these crops place on soil resources and the resulting intensification for use of land in certain areas farmers will want to carry out as very closely in relation to soil land use and tend in their rotation decisions in terms of production resources.

A choice therefore arises between commodities as to which should be given priority such as wheat or flaxseed cotton or grain sorghums dry beans or sugar beets. Farmers will want to reconsider their plans for planting spring wheat in view of the need for flaxseed and the excellent condition of the large acreage of winter wheat.

There are several reasons for continuing heavy production in 1947. First there is a strong domestic demand. Second there is need to build

up stocks for export and for home use. Third, the world food picture is favorable and the United States has a surplus. Fourth, the world food picture is favorable and the United States has a surplus. Fifth, the world food picture is favorable and the United States has a surplus.

It is worth noting that the average of such crops can be a good deal of use and some of the crops in the United States are a collection of these commodities. It is also more common with the United States to have a surplus of the United States will be a surplus of the United States.

This does not mean that an unlimited demand for land in commercial production. The goals of the United States are to be a surplus of the United States. By extending the goals of the United States to be a surplus of the United States. It is also more common with the United States to have a surplus of the United States. The need for such shifts may be expected to intensify as time goes on and as economic conditions change. Even for

full domestic requirements for drying oils. The high goal for soybeans arises from the extremely strong demand for edible fats and oils. The demand for protein meal for livestock feeding also makes high goals desirable for these commodities.

The requirements for peanuts are for edible purposes only. The goal is 51 percent above the prewar 1937-41 average, although substantially below wartime levels.

**Cotton:** The largest acreage increase over 1946 of any commodity is suggested for cotton in 1947. The goal is predicated upon the need for approximately 12 million bales of cotton (9 million bales for domestic consumption and 3 million bales for export).

**Sugar Crops:** In view of the severe world shortage, sugar beet and sugarcane goals are again placed at the maximum as measured by processing facilities and production resources.

**Vegetables:** Adjustments in the 1947 potato goals below 1946 acreages are designed to bring production in line with requirements and minimize waste of resources. Supplies of potatoes this year were so large many farmers had serious marketing difficulties. Only growers who plant within their individual farm goal for potatoes will be eligible for price support in 1947.

The sweetpotato goal calling for an increase above 1946 acreage has been developed in accordance with requirements and marketing facilities for handling the crop.

The production guides established for truck crops both for fresh market and for processing are designed to secure a more balanced use of the truck crop acreage so that consumer needs will be met and wasteful surpluses of certain vegetables will not occur (as for onions and cabbage this year).

**Tobacco:** Production goals for the different kinds of tobacco have been developed on the basis of requirements and production possibilities. For flue-cured, burley, fire-cured and dark air-cured tobacco except

Type #37, farm acreage allotments under marketing quotas will be established.

**Hay:** The goal acreage is intended to provide needs for expected livestock numbers and at the same time encourage seed production and soil conservation.

**Legume and Grass Seed:** Legume and grass seed goals generally are high because of the need for reseed-ing hay fields and pastures. In terms of the different seeds there is a continued strong demand for alfalfa, red clover, alsike clover, sweet clover, brome-grass, and blucgrass. Orchard grass is the only seed where a sharp downward adjustment in acreage is asked in order to bring supply in line with demand.

**Beef Cattle:** A beef cattle slaughterer of 34.5 million head is proposed for 1947. This compares with an estimated slaughter of 32 million during 1946. The goal is designed to provide for a consumption of 155 pounds of meat per capita, substantially higher than the 126 pound average for the prewar years, 1933-39, and above the 140-145 pounds for 1946. The increased slaughter is desirable both from the standpoint of furnishing needed meat supplies when the market is strong and to bring about a desirable adjustment in the beef cattle industry.

**Hogs:** Because of the need for greater pork output in both 1947 and 1948, the goals ask for a substantial increase in hog production next year. The 9.2 million sows for farrowing next spring, which the goals call for, are about 13 percent more than the number farrowed in the spring of 1946 and are expected to produce a spring pig crop of 53 million head.

**Sheep and Lamb:** The goal proposes a reduced slaughter in order to check the downward trend in sheep numbers.

**Dairy:** The dairy goal appears to be the maximum attainable production in view of cow numbers. Slowing down in the recent heavy rate of culling and heavier feeding of dairy cows to increase output per cow is stressed to attain this goal.

**Poultry:** The goal for egg production can be attained, with normal culling, from the present indicated number of hens and pullets. The egg production called for by the

goal is 29 percent above the 1937-41 average production.

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*Production and Marketing  
Administration*

## World Food Picture This Winter

**WHILE** the people of the United States and several other countries in the Western Hemisphere will have record and near-record quantities of food this winter and spring, millions of people in large areas of the world will again have extremely short food supplies.

Although total food production throughout the world in 1946-47 will be about 7 percent above last season's low output and may slightly exceed the prewar average, crop acreages in many war-devastated areas and those stricken by drought last year are still below normal. Scarcities of seed, draft power, fertilizer and equipment have limited yields. Therefore, these countries and those usually supplied by them are still in need of large imports to meet their most urgent food requirements, and such imports will have to be carefully utilized if another acute food shortage is to be averted next spring.

Compared with last year, the greatest increases in food production occurred in Europe, particularly in the countries bordering on the Mediterranean, and in North Africa. The sharp increase in food production has relieved the acute food shortage in these areas and permitted some increase in the very low rations prevailing last summer. But production was still somewhat below average and many of these countries will require extensive food imports during the current consumption year. Production increases in the remainder of Europe were much smaller, and in Austria, Germany, Poland, and several of the Balkan countries supplies of food, particularly on a per capita basis, are still sharply below prewar.

In Ireland and the United Kingdom food production was slightly above prewar but has been consid-

erably reduced from last year by excessive rains during the harvesting period. The unfavorable weather not only resulted in extensive harvest losses, but also reduced the percentage of the harvest which could be used for food.

In the Far East, where the food supplies also were extremely short this past year, prospects for food production during 1946-47 are somewhat better than a year earlier. Improved prospects for crops in India have resulted in greater deliveries to markets than were anticipated earlier in the year and it is probable that, with protective imports, India will have sufficient food to continue present low rations until the new rice crop becomes available in December. Even if larger crops are harvested in India this year, however, substantial imports will be needed during the coming year because of the almost complete exhaustion of reserve food stocks.

Crop prospects in China also are somewhat better than a year earlier, though there are still many areas in the interior where food production has not yet returned to prewar levels and food supplies will be extremely short. The lack of transportation facilities greatly limits quantities of food that can be moved into these areas, and also limits the movement of food from the surplus areas to the large cities thus making them more dependent on imports.

Growing conditions in Japan were especially favorable in 1946 and largely offset the shortage of fertilizer. By cutting livestock production and using as food a larger proportion of the crops produced, the total supply of food (in terms of calories) is nearly equal to the prewar average. However, the population is somewhat above prewar, due

to the repatriation of Japanese civilians and military forces formerly in China, Korea, and Manchuria. Stocks of food were used up during the past year so the need for food imports during the coming year will be about as great as it was during the 1945-46 consumption year.

Production of food in other countries of the Far East, particularly in Korea and the importing countries such as the Philippines, British Malaya and Ceylon, is much below normal and all of these countries will need substantial imports of food during the coming year.

The demand for food products in many other countries is also large. In nearly all countries of the world, food stocks have been reduced to a minimum during the past year. In some areas they are so short it is difficult to provide a steady flow of food to consumers, and even some surplus food producing areas are anxious to increase their reserves of foodstuffs. Many countries are seeking to increase rations which have been too low to maintain physical strength; in other areas which were not devastated by the war and where consumers purchasing power is high, consumption of food products is at an unusually high level. Thus despite the substantial increase in world food production, the demands for exportable supplies of food during the coming year are about equal to those of the past year.

In contrast to the large demand for food products, supplies available for export during the current year are not significantly larger than they were last year because of reduced stocks. Much of the increase in food production this year was in areas where supplies are not readily available for export. This is particularly true in the surplus producing areas of Brazil, Argentina, China and Russia. Even in the United States and Canada, the movement of surplus supplies to ports for export is limited by the shortage of transportation facilities.

Rice, fats and oils, and sugar are the foods in shortest supply throughout the world. Their shortage has created an extraordinary demand

for wheat and other cereals and, though exports of these products are well above prewar, supplies are much less than are required in many importing countries.

Over two-thirds of the rice normally grown for export is produced in Burma, Siam and French Indo-China. Unfavorable weather, political upheavals and other adverse factors have drastically cut rice production in these countries, so that, together with the reduced output in Korea and Formosa, other leading export countries, total rice exports will only be a fourth of normal. Thus the Far East is now a large importer of cereals instead of net exporter.

Exportable supplies of vegetable fats and oils for 1947 are less than half of the prewar trade, and the sharp reduction in European production of butter and lard has reduced available supplies of all fats and oils way below demand.

World sugar production in 1946-47 will be about 13 percent below prewar, with the greatest decrease in the important export producing countries of Formosa, Java and the Philippines. European sugar production is also far below prewar levels, and countries there are requesting large imports. The strong demand for the short world supply means that the allocation of sugar will probably be continued through 1947 in order to maintain an equitable distribution of current supplies.

Because of the importance of wheat and other cereals in meeting the world food shortage, it is essential that as much as can be spared in exporting countries be assigned for export.

C. M. PURVES, *Office of Foreign Agricultural Relations*

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In 1945 a fourth of the people in the United States, including farmers, had no savings at all, in either banks, war bonds or any other form. Another fourth had less than \$500. In contrast, a fifth of the people held three-fourths of the individual savings in the country. These are the findings of a recent BAE study.

## Three Decades of Taxes on Farming

**D**URING the last three decades, the Nation has passed through two World Wars, costing vast sums of public money. Government services have expanded with the growth of the country during this period. Highway systems have been enlarged and improved, school programs are more varied and costly, assistance to the aged, indigent, and unemployed has been increased. All these expenditures are in addition to those for a wide variety of services provided for farmers and other citizens by Federal, State, and local governments. In short, the trend has been in the direction of providing more and more services through the agency of government.

These changes in government services naturally made for changes in taxes. New taxes were adopted and the rates on old taxes were modified. This is reflected in the amounts of and trends in the various taxes that directly affect farmers.

Historically, the property tax has been the chief tax levied against agriculture. Levies on farm property amounted to about \$525,000,000 in 1945 compared with the peak of \$640,000,000 in 1929, the depression low of \$420,000,000 in 1934 and a 1909-13 average of about \$215,000,000. During the years immediately preceding World War II and continuing through most of the war years, farm property taxes fluctuated within narrow limits. Changes were much smaller than during the preceding decade, including the years of World War I, when property tax levies increased sharply.

The general rise in property taxes during World War I reflected mainly the costs of expanding public services. The relative stability of property tax levies during recent years has been brought about partly by the fact that many States have depended on other taxes for significant portions of their revenues, and partly by curtailment of many activities of State and local governments during the war. However, levies now are being appreciably in-

creased in many communities as these governmental units undertake to catch up on deferred needs.

So far as the majority of farmers are concerned, payment of Federal income taxes has been essentially a wartime phenomenon. Such payments by farmers in 1945 and 1946 are tentatively estimated at about \$600,000,000 annually. During the period between the wars Federal income tax payments by farmers probably were negligible. And during the high-income years of World War I, although many farmers paid income taxes, the rates were modest compared with now. As for State income taxes, fewer than two-thirds of the States levy such taxes and, compared with the Federal tax law, the exemptions generally are high and the rates low. Farmer payments of State income taxes probably have not exceeded \$40,000,000 annually even during the recent high income years.

Taxes and license costs arising out of the ownership and use of motor vehicles also make up a sizable part of farmer payments to the support of public services. Before World War I rather modest State license fees on automobiles and trucks were the main item in this category. State taxation of gasoline began in a small way in 1919 and by 1929 all States had such a tax. The Federal Government began to tax gasoline in 1932. Also, from 1942 through 1945 Federal Government imposed a use tax on automobiles and trucks.

In recent years farmers have paid about \$200,000,000 annually in automobile and truck licenses, drivers' permits, Federal and State gasoline taxes, and Federal use taxes. This amount is only about 10 percent below that for the peak year of 1942, as the Federal use tax on automobiles and trucks offset part of the decrease in revenues caused by wartime gasoline rationing and the unavailability of new cars.

Farmers also pay poll taxes and a wide variety of excises which apply

## **Tax Returns Due January 15**

**E**VERY farmer whose gross income during 1946 was \$500 or more must file a return even though no tax is due. The typical farmer has two choices as to the filing of returns. He may (1) file a return and pay the tax due by January 15, or (2) file an estimate of the tax due and pay this estimated tax by January 15, then file the return and pay any balance due by March 15.

both to their business and their personal transactions. In the group of miscellaneous taxes, the most important are those usually classed as State general retail sales taxes. About half the States now levy such taxes, although the rates and administrative details vary widely. The growth of retail sales taxes is largely a development of the 1930's, as many States adopted such taxes as temporary measures during the depression. But these taxes proved to be good revenue producers, and usually were retained after the emergency passed. Farmers may have paid as much as \$50,000,000 annually in State general sales taxes in the last few years and perhaps \$5,000,000 in poll taxes.

In addition, a related group of selective sales taxes undoubtedly accounted for substantial sums. These selective sales or excise taxes are levied by both the Federal and the State governments on a wide variety

of items including tobacco products, alcoholic beverages, admissions, transportation, and communications.

The outstanding changes in the farm tax situation over the last 30 years are: (1) the great increase in the amount of taxes paid by farmers and, (2) the increased diversification in the types of taxes paid. The increase in aggregate payments reflects primarily increased expenditures by all levels of government. The increased diversification within tax systems is reflected in changes in the relative importance of various taxes in the farm tax picture. The proportion of the farm tax load represented by the relatively inflexible property tax has been sharply reduced.

Farm taxes that have increased in importance generally are of the types which tend to vary in aggregate amount with incomes. Although they obviously reduce farmers' effective purchasing power, such taxes do not carry the direct threat of loss of farms that is part of the property tax.

In the absence of extensive analyses of the ultimate incidence of taxes upon various economic groups, it is not possible to state flatly that farmers are or are not paying a "proper" share of the tax load now, or whether they did so 30 years ago. But it seems clear that, generally speaking, the increased diversification in tax sources has tended to make it easier for farmers to meet their tax obligations.

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## **Let's Talk Turkey**

**T**URKEY production and consumption have expanded greatly in the past decade. Pounds of turkey produced in the last 3 years has averaged almost three times the output of the early thirties, and income to farmers from turkey production has been five to six times more.

Consumption of turkey meat averaged about 2 pounds per person in

1932-34, but jumped to 4½ pounds in 1945 and 1946. No longer considered exclusively a holiday meat, turkey is now consumed around the calendar, with public eating places and similar establishments serving turkey practically every day of the year.

True, wartime scarcities of red meats stimulated the demand for

turkey and chicken, but turkey meat consumption today is only 2 to 3 percent of total meat consumption—red meat plus poultry. However, demand for turkey is expected to be relatively strong during the next few years, though growers are not likely to continue receiving the record prices of the past few years. As long as a high level of consumer purchasing power continues, many of the wartime gains in turkey production and consumption will remain.

Even when total meat supplies become nearly in balance with demand, many improvements in turkey production during recent years will help give producers an added competitive advantage over prewar years. Important among these improvements are: (1) increased commercial hatching and smaller hatching losses, (2) decreased death losses through improved flock management, (3) development of smaller breeds for the modern small home even though the average weight is increasing, and (4) extension of the marketing season to level off price-depressing marketings.

The 1946 turkey crop of some 41 million birds was second only to the 1945 record output of 45 million. These crops are nearly two and a half times larger than the 18-million head average for 1929-31. Production today runs close to one turkey for every three persons, compared with one in seven in the early thirties.

The largest increase in turkey production has been in the North Atlantic and East North Central States, where the average production in 1944-46 was about four times that of the 1930's. Almost a fifth of the Nation's turkeys are produced in these regions now, compared with only about 10 percent a decade ago. Output in the West North Central States and the Western States is nearly three times what it was ten years ago, while production in the South Central States has continued about the same. In the past 2 years Minnesota, Texas, and California have each averaged better than 4 million birds annually.

The decided shift to commercial

hatching in recent years has been an important factor in reducing death losses of turkeys. Although a fifth of the poultts hatched in 1945 died before reaching maturity, these deaths totaled 23 percent in 1941 and probably a much larger proportion in earlier years. Death losses, already reduced significantly, can be expected to decline even further in the years ahead.

The National Turkey Improvement Plan in recent years has been another important factor in reducing death losses as well as in obtaining other production improvements such as better flock management, standardizing and improving varieties, more efficient feeding, and increased egg production of breeder hens. These and similar developments are tending to decrease the production costs.

Of particular interest in recent production trends, is the development of the smaller birds such as the Boltsville Small White on the one hand, and the very large birds such as the Texas Broad-breasted Bronze on the other. The former varieties were developed especially for consumption in the modern small home and apartment—the Toms average around 15 pounds and the hens 9 pounds. The broad-breasted varieties were also tailor-made to produce more meat per bird—the Toms average around 26 pounds and the hens 16 pounds. These larger birds are important to hotels, restaurants, and other large users which have made turkey more of a year-round meat. Military buying during the war stimulated production of the larger birds which put on more meat per pound of feed than do the smaller birds. But the smaller birds have the advantage of being more acceptable to the average housewife and command premium prices, especially during holiday marketings.

One of the major developments in the turkey industry is the spreading out of marketings during the year. In the late thirties 75 to 80 percent of the crop was marketed in November and December, compared to only 65 to 70 percent in the past 3 years.



Earlier hatchings in recent years is one of the important factors making possible early marketings.

Along with the lengthening of the marketing season the quantities of turkey going into cold storage have increased in the past 2 years, which has made possible around-the-year consumption. Improved marketing methods which were getting under way before the war interrupted them are now being developed even more. Among these developments are better packaging and merchandizing in frozen forms because of the expansion of deep freeze equipment in retail stores and elsewhere in the trade. There has been a large increase in the marketing of frozen eviscerated turkeys in appealing packages. Reduced military procurement of the larger turkeys in the past year or so has stimulated the marketing of cut-up birds from cold storage which will undoubtedly help increase turkey consumption. Frozen and pre-cooked turkeys are finding wider acceptance. And canning of turkeys, which was negligible prior to the war, has increased sharply because of military and hospital requirements.

Some say that the possibilities for improved marketing methods have not been scratched yet. And others say that better and more efficient production methods are just beginning to be adopted generally. With sufficient improvements in marketing and production, turkey growers would be able to sell turkeys at lower prices, thus offering a powerful stimulus toward greater consumption. Perhaps a decade from now turkey consumption will be substantially more than it is now.

GILTON G. IRVIN  
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## Cranberry Trends

**P**RODUCTION of cultivated cranberries, now a \$10,000,000 business, is a farming enterprise confined almost exclusively to the United States. Cultivation of cranberries is limited to a few areas in the northern part of this country, with world production being thus

virtually all in Massachusetts, New Jersey, Wisconsin, Washington, and Oregon.

The 1946 cranberry crop totaled 833,100 barrels of about 100 pounds each, only 5 percent less than the 1937 record of 877,303 barrels. During the past 6 years production has averaged around 680,000 barrels, about double the output around 1930.

Since 1929 the average price per barrel received by growers has ranged from a low of \$4.02 in 1914 to a high of \$24.30 in 1944. Wholesale prices at Chicago this season have been the highest in history, despite the near-record crop. The farm value of the crop has been at or close to \$10,000,000 in recent years, compared with only about \$2,000,000 in the early 1900's.

Cranberry varieties now grown commercially were developed from species native to the Northeastern States. The berries were first cultivated on Cape Cod about 1810 and first grown commercially in that area about 1850.

Production in the Cape Cod area has made Massachusetts the most important producing State. For many years Massachusetts has produced more than half the world supply of cultivated berries. Production there now averages about 500,000 barrels 2½ times the 1900 output.

Commercial production in New Jersey got under way about the same time as in Cape Cod. Reaching a peak of 241,000 barrels in 1910, production in New Jersey has gradually declined to an average of less than 90,000 barrels in recent years.

Cranberry production in Wisconsin became important by 1875, with the output remaining fairly constant till the late 1930's. The average output of Wisconsin growers is now about 100,000 barrels annually, four times that in the early 1900's. Production in Washington and Oregon, concentrated chiefly in a few narrow strips along the Coast, was negligible till the 1920's. The 1946 crops there set new records, Washington producing 46,200 barrels and Oregon 13,970.

Culture of cranberries differs greatly from that of any other im-

portant crop. Raised in bogs, or marshes, cranberries require cool summers, winters not too severe, and acid peat soil, and provision for both flooding and draining the bogs. Cranberry plants are perennial vines which produce a mat of growth up to a foot high, thus making harvest difficult. A new bog usually comes into full bearing 3 to 5 years after setting the plants, and will continue to produce for many years if given proper care. Acreage changes have been very gradual in recent years, but production has fluctuated widely from year to year largely because of weather damage.

Prior to the 1930's practically all cranberries were marketed as fresh berries. Since then commercial processing has rapidly expanded and now accounts for about half the crop. Before World War II, nearly all the processed berries were canned as sauce or jelly, but during some of the war years almost as many were dried as were canned, largely for the armed forces. Since then the proportion that is dried has declined sharply. In recent years cranberry juice or cocktail has been developed on a commercial scale.

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## Long-time Prospects for Meat Production

**D**URING the past 6 years, producers of meat animals have had practically an unlimited market. Greatly increased consumer incomes, huge meat exports, and large military purchases supported an unprecedented demand for meat and other livestock products at favorable prices despite record production.

The prospect now, however, is that the demand for meat will turn downward by late 1947 or early 1948. Consumers in the past few years have been spending a smaller-than-usual proportion of their incomes for scarce non-farm goods, such as automobile, refrigerators and sewing machines. More of these goods are now becoming available, and consumers are expected to increase their expenditures for these items, and to spend a smaller share of their incomes for food.

Also, industrial and business activity are expected to decline from present levels during the latter part of next year. This decline, if it occurs, will lead to a decrease in prices received by farmers for meat animals, as meat-animal prices are always sensitive to changes in consumer incomes. This decline would result in lower cash receipts to producers and probably lower net returns. Significant in the picture here is the fact that, in a period of falling prices, meat-animal prices

usually fall faster than the prices of commodities and services purchased for farm production and family living.

When price controls on meat were imposed in early 1942, prices of hogs, cattle, sheep, and lambs increased over 35 percent from 1941. Prices rose 22 percent under controls from April 1942 to June 1946, then increased substantially from July to September 1946, and after final decontrol in October 1946 reached even higher levels. In October 1946 they were 38 percent higher than in June 1946, although since that time they have declined somewhat. Prices are likely to be well maintained close to present levels this winter, despite a seasonal peak in meat production.

Meat-animal production reached a peak in 1944 when it was 41 percent greater than in 1939. Then total meat output declined moderately in 1945 and 1946 chiefly because of reduced hog production. But hog production in 1947 probably will be greater than in 1946 and cattle and calf production probably will be close to the 1945 record. Total meat-animal production is likely to continue at a high level into 1948.

### Hogs

After decontrol, hog prices soared to new highs and, as corn prices fell from the record summer levels, the

hog-corn ratio became favorable for increased hog production. Farmers can be expected to feed the hogs they now have on hand to heavy weights, and probably will increase spring farrowings. The spring pig crop of 1947 is likely to be substantially greater than in 1946 and probably will be the largest since the record large 1943 crop. An increase in the next fall's pig crop also is likely, as corn supplies are expected to be large.

Hog prices are likely to remain relatively high through next summer, especially as the 1946 fall pig crop is small. Although supplies of pork through next summer will be relatively small, it would appear that supplies will increase more-than-usual in the fall and winter of 1947-48 and may continue large throughout that marketing year. Winter hog marketings in 1947-48 now promise to be one of the largest.

Continued increases in hybrid corn acreages, further mechanization, and improved cultural practices, which are almost certain, point to large corn crops in the years ahead which will encourage large hog production.

### Beef Cattle

Cattle numbers increased around 17 million head from 1938 to 1944. The peak of 83 million head was reached in that year, 11 percent higher than the previous high of 1934. Numbers declined slightly in 1945 then increased somewhat in 1946. In recent years cattle numbers have increased more in the Western Corn Belt and in the Western States than in other regions. Declining numbers of work stock, improved pastures, better feed supplies and lower cereal prices make it possible to feed the large cattle herd. Total sheep and cattle numbers in some of the Western and Northern Plains States may be in excess of grazing capacity under average weather and crop conditions. In other States, livestock numbers seem to be in close balance with grazing and forage resources.

The present level of cattle numbers could permit near-record pro-

duction of beef and veal in 1947. Exports of beef next year are likely to decline from the high wartime levels. In the next year or two at least, per capita supplies of beef in this country promise to be among the largest since World War I.

### Sheep

Stock numbers at the beginning of 1947 will be the smallest in about two decades. Sheep numbers have declined around 15 million head or 27 percent from the 1942 peak. Numbers now are only around 13 percent above the low of 1923.

Lamb and mutton supplies in the next few years will be low, if breeding stock numbers continue declining. Stock numbers stabilize or increase, winter would fall off sharply because of the retention of more ewe lambs for flock replacements and less culling of older ewes. Small per capita supplies of lamb in prospect indicate that prices of lamb will be high relative to beef or pork.

The principal uncertainty in the sheep industry is the unfavorable outlook for wool prices. United States Government wool stocks are now roughly equivalent to a year's domestic consumption at prewar rates. World wool stocks are now the largest on record, chiefly the result of war-interrupted consumption in Continental Europe and Japan. But as consumption increases in these important consuming countries, stocks may be reduced and this would bring supplies more in balance with consumption.

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*Bureau of Agricultural Economics*

### Fats and Oils

PRICES of most oilseeds, oilseed meals, fats, and oils rose sharply to record highs when price ceilings were removed in October. In late November, crude cottonseed, corn, soybean, and peanut oils were selling for 23 to 27 cents per pound, nearly double the former ceiling levels. Lard was around 30 cents per pound (wholesale, Chicago) compared with the old ceiling of 18.3 cents per pound. Prices of fat-and-oil products—margarine, short-

## Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Nov. 15, 1945	Oct. 15, 1946	Nov. 15, 1946	Parity 1909-1914, 1946
	August 1909-July 1914	January 1914- December 1939				
Wheat (bushel).....dollars	0.884	0.837	1.53	1.45	1.60	2.87
Rice (bushel).....do	.813	.742	11.82	2.14	2.14	1.72
Corn (bushel).....do	.62	.491	1.11	1.71	1.7	1.38
Oats.....do	.563	.510	.69	.79	.72	.10
Hay (ton).....do	11.87	8.87	11.13	16.10	17.10	27.21
Cotton (pound).....cents	12.4	10.34	22.2	37.69	29.12	24.29
Soybeans (bushel) <sup>2</sup> .....dollars	2.96	2.64	2.69	2.28	3.03	2.01
Peanuts (pound).....cents	4.8	3.55	9.30	8.74	9.33	10.20
Potatoes (bushel).....dollars	.697	.717	1.31	1.22	1.23	1.57
Apples (bushel).....do	.96	.90	3.08	2.37	2.15	2.04
Oranges on tree, per box <sup>3</sup> .....do	1.61	1.11	2.05	2.84	1.49	2.3
Hogs (hundredweight).....do	7.27	8.84	14.20	23.00	22.40	15.10
Beef cattle (hundredweight).....do	5.42	6.56	11.30	18.19	17.00	11.40
Veal calves (hundredweight).....do	6.73	7.80	12.60	17.00	17.30	14.40
Lambs (hundredweight).....do	5.68	7.79	12.70	17.50	18.41	12.30
Butterfat (pound) <sup>4</sup> .....cents	26.3	29.1	130.5	99.0	84.4	66.3
Milk, wholesale (100-pound) <sup>5</sup> .....dollars	1.00	1.61	13.38	11.97	75.03	63.73
Chickens (pound).....cents	11.4	11.9	27.9	24.4	27.5	24.2
Eggs (dozen).....do	21.5	21.7	47.1	51.5	47.8	55.8
Wool (pound).....do	16.3	23.8	140.8	41.1	40.9	36.8

<sup>1</sup> Revised.

<sup>2</sup> Comparable base price, August 1909-July 1914.

<sup>3</sup> Comparable price computed under section 3 (b) Price Control Act.

<sup>4</sup> Comparable base price, August 1918-July 1929.

<sup>5</sup> Does not include daily production payments made directly to farmers by county PMA offices October 1943 to June 1946.

<sup>6</sup> Adjusted for seasonality.

<sup>7</sup> Preliminary.

ening, soap, and paint—also have continued high. Soybeans in late November were mostly at about \$3.30 per bushel, country track, the highest since 1920. And flaxseed was at the unprecedented level of \$7.25 per bushel, Minneapolis, compared with the previous peak of \$5.64 in July 1919.

Present prices reflect the present record peacetime levels of consumer incomes and industrial activity, in conjunction with relatively small supplies of fats and oils in the United States. Imports of fats and oils, though increasing, are still at a rate less than half the prewar level of 2 billion pounds annually. Production from domestic materials is only moderately larger than the prewar average of 8.4 billion pounds annually. Increases over prewar in production of soybean oil and tallow are largely offset by decreases in output of cottonseed oil and butter. Stocks of fats and oils declined steadily (except for seasonal variations) from a peak on July 1, 1944,

until October 1946, where they were only 1.2 billion pounds, three-quarters of a billion pounds below prewar.

A major decline in prices of fats, oils, and oilseeds is not likely for several months *unless* there is a decline in general business activity. Supplies of fats and oils will remain relatively small until the fall of 1947. By that time, imports of fats and oils probably will have increased further; the harvest of the 1947 crop of oilseeds, which may be large, will have begun; and inventories of fats and oils probably will have been built up moderately from the present exceptionally low level.

In the meantime, there probably will be a moderate increase in production and consumption of butter. Soap manufacture may increase moderately as Philippine copra arrives in volume. But supplies of lard, margarine, and shortening available for consumption are not likely to be quite so large, in total, as in 1946.

# Economic Trends After: Agriculture

Year and month	Index of price received by farmers (1909-10 = 100)	Index of price received by farmers (1909-10 = 100)	1910-11 = 0			Livestock and products				
			Whole sale price of all commodities	Prices paid by farmers		Farm wage rate	Dairy products	Poultry and eggs	Vegetables	All livestock
				Commodities	Commodities					
1910 1st year	100	100	100	100	100	100	100	100	100	100
1910 2nd year	100	100	100	100	100	100	100	100	100	100
1910 3rd year	100	100	100	100	100	100	100	100	100	100
1910 4th year	100	100	100	100	100	100	100	100	100	100
1910 5th year	100	100	100	100	100	100	100	100	100	100
1910 6th year	100	100	100	100	100	100	100	100	100	100
1910 7th year	100	100	100	100	100	100	100	100	100	100
1910 8th year	100	100	100	100	100	100	100	100	100	100
1910 9th year	100	100	100	100	100	100	100	100	100	100
1910 10th year	100	100	100	100	100	100	100	100	100	100
1910 11th year	100	100	100	100	100	100	100	100	100	100
1910 12th year	100	100	100	100	100	100	100	100	100	100
1910 13th year	100	100	100	100	100	100	100	100	100	100
1910 14th year	100	100	100	100	100	100	100	100	100	100
1910 15th year	100	100	100	100	100	100	100	100	100	100
1910 16th year	100	100	100	100	100	100	100	100	100	100
1910 17th year	100	100	100	100	100	100	100	100	100	100
1910 18th year	100	100	100	100	100	100	100	100	100	100
1910 19th year	100	100	100	100	100	100	100	100	100	100
1910 20th year	100	100	100	100	100	100	100	100	100	100
1910 21st year	100	100	100	100	100	100	100	100	100	100
1910 22nd year	100	100	100	100	100	100	100	100	100	100
1910 23rd year	100	100	100	100	100	100	100	100	100	100
1910 24th year	100	100	100	100	100	100	100	100	100	100
1910 25th year	100	100	100	100	100	100	100	100	100	100
1910 26th year	100	100	100	100	100	100	100	100	100	100
1910 27th year	100	100	100	100	100	100	100	100	100	100
1910 28th year	100	100	100	100	100	100	100	100	100	100
1910 29th year	100	100	100	100	100	100	100	100	100	100
1910 30th year	100	100	100	100	100	100	100	100	100	100
1910 31st year	100	100	100	100	100	100	100	100	100	100
1910 32nd year	100	100	100	100	100	100	100	100	100	100
1910 33rd year	100	100	100	100	100	100	100	100	100	100
1910 34th year	100	100	100	100	100	100	100	100	100	100
1910 35th year	100	100	100	100	100	100	100	100	100	100
1910 36th year	100	100	100	100	100	100	100	100	100	100
1910 37th year	100	100	100	100	100	100	100	100	100	100
1910 38th year	100	100	100	100	100	100	100	100	100	100
1910 39th year	100	100	100	100	100	100	100	100	100	100
1910 40th year	100	100	100	100	100	100	100	100	100	100
1910 41st year	100	100	100	100	100	100	100	100	100	100
1910 42nd year	100	100	100	100	100	100	100	100	100	100
1910 43rd year	100	100	100	100	100	100	100	100	100	100
1910 44th year	100	100	100	100	100	100	100	100	100	100
1910 45th year	100	100	100	100	100	100	100	100	100	100
1910 46th year	100	100	100	100	100	100	100	100	100	100
1910 47th year	100	100	100	100	100	100	100	100	100	100
1910 48th year	100	100	100	100	100	100	100	100	100	100
1910 49th year	100	100	100	100	100	100	100	100	100	100
1910 50th year	100	100	100	100	100	100	100	100	100	100

Year and month	Index of price received by farmers (1909-10 = 100)									Price received
	Crops								All crops and livestock	
	Food crops	Feed crops	Textile crops	Cotton	Wool	Grain	Oil crops	All crops		
1910 1st year	100	100	100	99	100	99	100	99	100	100
1910 2nd year	100	100	100	100	100	100	100	100	100	100
1910 3rd year	100	100	100	100	100	100	100	100	100	100
1910 4th year	100	100	100	100	100	100	100	100	100	100
1910 5th year	100	100	100	100	100	100	100	100	100	100
1910 6th year	100	100	100	100	100	100	100	100	100	100
1910 7th year	100	100	100	100	100	100	100	100	100	100
1910 8th year	100	100	100	100	100	100	100	100	100	100
1910 9th year	100	100	100	100	100	100	100	100	100	100
1910 10th year	100	100	100	100	100	100	100	100	100	100
1910 11th year	100	100	100	100	100	100	100	100	100	100
1910 12th year	100	100	100	100	100	100	100	100	100	100
1910 13th year	100	100	100	100	100	100	100	100	100	100
1910 14th year	100	100	100	100	100	100	100	100	100	100
1910 15th year	100	100	100	100	100	100	100	100	100	100
1910 16th year	100	100	100	100	100	100	100	100	100	100
1910 17th year	100	100	100	100	100	100	100	100	100	100
1910 18th year	100	100	100	100	100	100	100	100	100	100
1910 19th year	100	100	100	100	100	100	100	100	100	100
1910 20th year	100	100	100	100	100	100	100	100	100	100
1910 21st year	100	100	100	100	100	100	100	100	100	100
1910 22nd year	100	100	100	100	100	100	100	100	100	100
1910 23rd year	100	100	100	100	100	100	100	100	100	100
1910 24th year	100	100	100	100	100	100	100	100	100	100
1910 25th year	100	100	100	100	100	100	100	100	100	100
1910 26th year	100	100	100	100	100	100	100	100	100	100
1910 27th year	100	100	100	100	100	100	100	100	100	100
1910 28th year	100	100	100	100	100	100	100	100	100	100
1910 29th year	100	100	100	100	100	100	100	100	100	100
1910 30th year	100	100	100	100	100	100	100	100	100	100
1910 31st year	100	100	100	100	100	100	100	100	100	100
1910 32nd year	100	100	100	100	100	100	100	100	100	100
1910 33rd year	100	100	100	100	100	100	100	100	100	100
1910 34th year	100	100	100	100	100	100	100	100	100	100
1910 35th year	100	100	100	100	100	100	100	100	100	100
1910 36th year	100	100	100	100	100	100	100	100	100	100
1910 37th year	100	100	100	100	100	100	100	100	100	100
1910 38th year	100	100	100	100	100	100	100	100	100	100
1910 39th year	100	100	100	100	100	100	100	100	100	100
1910 40th year	100	100	100	100	100	100	100	100	100	100
1910 41st year	100	100	100	100	100	100	100	100	100	100
1910 42nd year	100	100	100	100	100	100	100	100	100	100
1910 43rd year	100	100	100	100	100	100	100	100	100	100
1910 44th year	100	100	100	100	100	100	100	100	100	100
1910 45th year	100	100	100	100	100	100	100	100	100	100
1910 46th year	100	100	100	100	100	100	100	100	100	100
1910 47th year	100	100	100	100	100	100	100	100	100	100
1910 48th year	100	100	100	100	100	100	100	100	100	100
1910 49th year	100	100	100	100	100	100	100	100	100	100
1910 50th year	100	100	100	100	100	100	100	100	100	100

1. Figures are Board reports of output of mining and manufacturing, monthly data adjusted for seasonal variation.  
 2. Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on passenger rates, manufacturing and transportation, monthly data adjusted for seasonal variation.  
 3. Figures are from Bureau of Labor Statistics.  
 4. Figures are adjusted for seasonal variation.  
 5. Revised.  
 6. Ratio of prices received to prices paid for commodities, net cost, and taxes.  
 1924 only.

## Dairy Products

**P**RICES received by farmers for milk and butterfat will soon decline, as production increases seasonally. However, through the first half of 1947, returns to farmers are likely to be higher than the prices plus subsidies of a year earlier. In mid-November, prices received by farmers for all dairy items were 52 percent above November 1915 and 158 percent above the 1935-39 average.

The desire of manufacturers and distributors to build up and maintain stocks has helped account for the rising prices of dairy products, but probably will have less effect after the coming production upturn. Another factor in the dairy price outlook is the fact that consumer expenditures for foods have increased sharply since the removal of price control. Unless wages and salaries increase substantially, spending for foods is likely to decline as expenditures for other commodities increase in coming months.

Dairy products were not directly involved in the widespread decontrol action during October, because dairy price ceilings were not reimposed after originally expiring on July 1. However, the butterfat-hog and butterfat-beef cattle price ratios became relatively unfavorable to dairying after meat prices were decontrolled. Nevertheless, supplies of feeds are large enough to permit expansion of the 1947 spring pig crop and an increase in cattle-feeding without curtailing supplies available to dairying. Dairy product-price ratios were more favorable in October than during the past summer, and are likely to continue at the long time average or above, well into 1947.

Consumption of fluid milk and cream has continued to decline more than seasonally. As a result, the proportions of the national milk supply used in manufactured products is larger now than a year ago.

●  
In the last 50 years potato yields have increased a bushel an acre a year.

## Truck Crops

**P**RODUCTION goals for 1947 winter vegetables ask an increase of 5 percent over the acreage harvested in the winter of 1943. Because yields last winter were above average the goal acreage probably would produce about one-tenth less tonnage than was obtained last winter.

Growers may not plant up to the goal acreages. Early estimates, covering 8 crops that made up more than half of the winter acreage of 1943 point to a slight reduction from 1946 acreage of these crops. Even if other winter vegetables show a similar reduction, the total acreage for harvest this winter would still be about one-fifth above the 1936-45 average. With average yields, tonnage would be about an eighth less than last winter though a fifth above average.

Artichoke acreage is up nearly one-fourth from last winter. Winter beet production is expected to be about one-third below 1946 as acreage probably will be down considerably from last winter. Cabbage growers plan to increase their acreage moderately above last winter's total. A record large crop of winter cauliflower is in prospect—nearly 4½ million crates. Kale supplies probably will be larger than last season.

Lettuce acreage will be off about 6 percent from last winter, but will be about 40 percent above average. Shalot production, although considerably below that of last winter will be larger than average.

Winter spinach acreage was reduced this year. However, above-average yields are in prospect and production is expected to be considerably larger than the 1946 crop.

Acreage of winter-season commercial early Irish potatoes, the earliest new crop, will be down from last season.

In general, prices to growers for commercial truck crops for fresh market probably will rise seasonally this winter. The level of prices is expected to be about the same as a year earlier.

## Fruit

**C**ITRUS growers in the 1946-47 season will produce more than 200 million boxes—about 64 million tons—for the first time in the history of the citrus industry if present prospects are realized. The current crop will set a new high for the fifth consecutive year, topping the 1943-46 crop by one-eighth and more than doubling the 1935-39 average.

The early and mid-season orange crop, now being harvested, will set a new record of 564 million boxes, about one-fifth more than last season. Grapefruit production is expected to slightly exceed last season's record of 633 million boxes. But lemon production may be slightly smaller than a year ago, when 145 million boxes were grown.

Fifteen million supplies of fresh and processed citrus will be available in the coming year. There may be some increase in exports but most of the crop will remain for disposal in domestic markets. Although there may be some increase in the quantities of citrus marketed in fresh form it seems probable that most of the increased production will be processed into juice and segments. If so, another record large pack of citrus will be canned and frozen this season.

The pack of canned citrus juices has quadrupled since the 1939-40 crop, reaching a new high of more than 60 million cases (24 No. 2's) in the 1945-46 season. Most of the increase in the past three seasons consisted of orange juice and blended orange and grapefruit juice, although grapefruit juice continued to be the largest item packed.

During the war substantial quantities of orange juice were canned in concentrated form for the armed services and lend-lease. Even so, civilian per capita consumption of citrus juices tended to increase, reaching a level of 76 pounds in 1944 and 1945 and increased further to about 11.5 pounds in 1946. Civilian per capita consumption of all canned fruit juices in 1946 (including pineapple, grape, apple, and others) is estimated at 15 pounds. Per capita consumption of fresh

citrus in 1946 is estimated at slightly more than 50 pounds, and that of all citrus, including processed on a fresh fruit equivalent basis, at about 90 pounds.

Demand for fruit is expected to continue strong this winter, with the record-large new citrus crop marketed at prices generally near those of a year ago. For the season as a whole, however, prices may not average quite as high as for the season just closed, yet be well above prewar levels.

Although citrus will provide the largest volume of fresh fruit this winter, there also will be substantial supplies of apples and pears. Cold-storage holdings of these two fruits on November 1 were far above those of a year earlier and somewhat above average. Stocks of frozen fruit on November 1 also were substantially larger than a year earlier.

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